DOCUMENT RESUME

ED 222 086 FL 013 268

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TITLE Project Adelante. Final Evaluation Report.
INSTITUTION Hartford Public Schools, Conn.
PUB DATE Sep 82
NOTE 163p.

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS *Academic Achievement; *Bilingual Education Programs; Elementary Education; English; Hispanic Americans; *Language Skills; Parent Participation; Program Effectiveness; *Program Evaluation; *Spanish; Spanish Speaking; Staff Development
IDENTIFIERS Connecticut (Hartford)

ABSTRACT

An evaluation was conducted of "Project Adelante," an ESEA Title VII project supporting a Spanish-English bilingual education program in Hartford, Connecticut. The federal funding provided personnel for staff development, parent involvement, and evaluation over 5 years of a bilingual education program serving 600 Hispanic children in 3 elementary schools. The evaluation focused on student achievement in Spanish and English and other subject areas, and implementation of staff development and parent involvement. Data on the program's context, input, process, and product were obtained from standarized tests of student achievement, attitude, and self-concept; staff questionnaires; student records; and observations of instruction. Results are presented on educational context, staffing and curriculum, instructional processes, perceptions of administrative support, staff development activities, parent involvement, achievement in primary grades, and achievement in intermediate grades. Among the findings, it is reported that: (1) the instruction, curriculum, materials, staff development, and parent involvement program are of high quality; (2) the parent involvement program has had only limited success in increasing parent involvement; and (3) project pupils show a pattern of low Spanish language scores on entry, a consistent pattern of low achievement, and high rates of repeating grades. Recommendations are made regarding additional Spanish oral language instruction and improvement of the testing program. (RW)

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PROJECT ADELANTE
FINAL EVALUATION REPORT

Hartford, Connecticut
September, 1982

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ACKNOWLEDGEMENTS

Reports of this size are rarely done without help, and I acknowledge and thank a number of people who have been particularly helpful.

Throughout the five years of the Project, the constant encouragement and support from Project Director Aida Schumey has lessened the pain and made the rewards greater. Edna Smith, the coordinator of the bilingual department has also been a loyal supporter, smoothed over some of the inevitable rough spots, and help make me feel that it was worthwhile.

Dr. Robert Nearine has read each of the drafts with great care, and made numerous suggestions which have led to substantial improvements in the clarity and consistency of all the reports. He also provided the kindergarten screening scores, the analysis of which added to the substance of the conclusions and recommendations.

Gloria DeJesus, coordinator of the district testing program has been reliable, patient and helpful beyond the normal requirements of conducting the testing program upon which this evaluation most critically depends. She and her people are keenly appreciated.

This year George McKay and Mary Lou Spada have broken ground by using the computer to extract the M.A.T. and C.T.B.S. scores and automatically put them into my computer file. George Haddad has been friendly and cooperative in allowing me to use his terminal to analyze the data, and in providing occasional programming help.

Principals, teachers and paraprofessionals in the Project and the school have been cooperative and helpful throughout in providing me with information and in the testing program. They also deserve a note of thanks here.

Notwithstanding the excellent secretarial support I have enjoyed in the earlier years, Pat DiGiacomo has in this past summer made the preparation of this document go easier than at any previous time.

A Word To The Reader

Organization of the Data

Chapters IV-XI contain the data and results. These chapters are organized into a series of two-page sub-sections, each of which answers a specific evaluation question. On the left-hand page is the topic, the evaluation question, a description of the source of data, results, conclusions, and implications, if any. On the right-hand facing page are the data which have been gathered and analyzed to answer the question.

Ways to Read the Report

Short of reading the whole report cover to cover, the raader may consider the following. 1) The summary in Chapter 1 is a two-page overview. 2) The summaries at the end of each chapter IV-IX are about a page long and usually shorter. Reading each of these provides about a ten-page overview. 3) The final chapter is important, and it concerns the implementation of the instructional program. 4) The Table of Contents provides a list of the topics investigated, and the reader may choose the specific areas of interest to read. Keep in mind that there are introductions to each chapter and to some sub-sections which may help understand specific evaluation questions and answers.

CHAPTER I

SUMMARY

Adelante in Brief

Project Adelante is an E.S.E.A. Title VII project supporting a Spanish-English bilingual education program in Hartford, Connecticut. Beginning in the fall of 1977 it served 300 Puerto Rican children in grades K-3 in eleven classrooms. In the final year it served 600 children in grades K-6 in twenty-five classrooms. The Title VII funding provided a project director, two instructional consultants, three paraprofessionals, a part-time evaluator, and funds for supplies, staff development, parent involvement, and evaluation.

Evaluation Findings

1. In English, Project pupils show significant gains in oral language, written language, reading, and mathematics, and significant gains in percentile rank in these areas.
2. In reading and mathematics tested in Spanish, Project pupils show significant gains in learning. These percentile rank scores show no significant change between pre and post testing.
3. In Spanish oral language testing in first and second grades, initially low scoring pupils show high gains, while initially high scoring pupils show consistent declines in percentile rank scores, apparently due to insufficient instructional emphasis.
4. When contrasted with comparison pupils representing mainstream instruction, Project pupils show much lower rates of retention in grade, and about the same test scores.

5. Project pupils show a pattern of low Spanish language scores upon entry to kindergarten, continued low scores in later grades, and high rates of retention in grade.
6. Test scores show that in first and second grades pupils in self-contained classrooms do better than those in pairing models.
7. Test scores show that in grades 3-6 pupils in self-contained classrooms and pairing or teaming models are doing equally well.
8. Analysis of Project implementation shows a core of trained teachers teachers and paraprofessionals providing sound instruction, a good staff development program, a developed curriculum, adequate instructional materials, administrative support, and a parent involvement program that has conducted many reasonable and appropriate activities but has had limited success in improving the general level of parent involvement.
9. The present structure of the instructional program does not allocate nearly enough instructional time to Spanish oral language before and during the early phases of Spanish reading instruction for these pupils.

Recommendations

1. Do not use the pairing model for these pupils in grades 1 or 2.
2. Provide additional instruction in Spanish oral language in the primary grades, e.g. by means of a full-day K-1 transition class, for about half of these pupils.
3. Recommendations are provdded for the improvement of the testing program, in order to help evaluate the instructional program and place pupils.

CHAPTER II

INTRODUCTION

Purpose of the Evaluation

The evaluation has two central aims. First, it must report to the funding agency on the progress of the program in accomplishing its various goals. It must especially report on the extent of pupil achievement in English and Spanish and other subject areas in the curriculum. Second, the evaluation must gather and report evidence which would help identify any needed changes or improvements in the operation of the program.

Evaluation is part of the Adelante package; the evaluator is a permanent (half-time) member of the Adelante staff. The current evaluation is the last of five annual reports.

Program Description

Project Adelante is a bilingual education program serving about 603 K-6 Hispanic children in three Hartford elementary schools. These schools are the Dominic F. Burns School, the Mary Hooker School, and the Fred D. Wish School. Hartford's Project Adelante is one of four federally-funded replications of a program originated in Corpus Christi, Texas.

While it is the responsibility of the school district to provide the basic bilingual program, it is the intent of the federal funding to improve program implementation with supplementary Spanish language materials, staff development, parent involvement efforts, and evaluation.

Adelante funding provides a project director, an instructional consultant, a community consultant, a part-time evaluator, two secretaries, three classroom paraprofessionals, parent involvement, testing and evaluation. All the above expenditures supplement the general budget.

Students Enrolled in the Program

Students enrolled in the program are pupils at Burns, Hooker, and Wish schools, grades K-6, who were determined through district-wide policy and procedures to need bilingual education. The program is designed to follow existing K-6 pupils through sixth grade, as well as accommodate and follow new entering kindergartners each year. However, the program was not permitted to expand to serve a larger number of kindergartners than were served the first year.

Wish school served 88; Hooker, 275; and Burns, 240 pupils for a total of 603 pupils. These numbers were based upon enrollment in March. The total number of pupils served for at least a portion of the year would be substantially higher.

Students are selected into the program in accordance with Connecticut statutes and Department of Education regulations. All students or their parents are given a home language survey. Those who report the use of a language other than English in the home are subsequently tested in language dominance and English language proficiency as the basis for placement decisions. Parents may nevertheless have their child placed in the mainstream by means of a procedure provided for in the regulations and district policy

Puerto Rico, New York and New Jersey are the major sources and destinations of moving families outside Hartford. There is also substantial moving among district schools.

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The School District

Hartford Public Schools is a medium-sized urban district with about 25,000 pupils. About half of these pupils are black, and another third are Puerto Rican. The Puerto Rican population has been growing steadily over the past twenty years.

Instructional Program

Adelante classrooms provide a full-day, full-year elementary program with the same objectives, curriculum, and books as bilingual classrooms throughout the district. The instructional program is also parallel to the mainstream (English) program. Subjects include speaking, reading and writing in both Spanish and English, mathematics, science and social studies.

Pupils are selected to participate in Adelante in the same way pupils are selected for other bilingual classes in Hartford. All or nearly all pupils enter the program with few skills in the English language.

Children are taught English using a special method known either as E.S.L. (English as a Second Language) or E.S.O.L. (English for Speakers of Other Languages). The bilingual classroom teacher is trained to use this method. In addition to this instruction by the classroom teacher, those children most in need are also enrolled for 45 minutes per day in a specially funded program called E.S.L. for intensive instruction in the English language.

All subjects are introduced first in the language the child knows best, Spanish. Corresponding instruction in English is provided when the child is prepared.

In kindergarten, the greatest emphasis is placed on Spanish. In subsequent grades, the proportion of English is gradually increased, both as a subject of instruction, and as a language of instruction.

Instructional services are almost entirely funded by the general budget, which provides twenty-five bilingual classroom teachers, sixteen paraprofessionals (one for each classroom serving K-2 pupils per district policy), and various specialists (e.g. music, special education).

Several factors have shaped the growth of bilingual education in Hartford. The district has pioneered in this area; it opened an all-bilingual school ten years ago under Federal funding, and it is still in operation. Bilingual programs were also developed in many other schools.

In the mid-seventies, the Office of Civil Rights and a local community agency found district efforts in this area to be inadequate, and this resulted in further efforts to expand and improve bilingual services. Later the State of Connecticut passed legislation mandating and regulating bilingual education. This act took effect during the 1978-79 school year.

The impact of these events is that Hartford now has an extensive bilingual program operating in nearly all its schools. Languages include Spanish, Portuguese, Italian, Vietnamese, Hmong, Lao, Greek, and Polish, and about 3700 pupils are served.

The district also has a director of bilingual education and an office of seven professional staff. The testing office also has bilingual testers, and much of its testing efforts are related to bilingual education. Working with the evaluator this office conducts and oversees the testing for Project Adelante.

CHAPTER III

EVALUATION DESIGN

Overview

The fifth year evaluation is the final segment of a five-year study of Project Adelante. The main goals of the evaluation are to report on instructional outcomes (Chapters X & XI) and the two major tasks of the Project, staff development (Chapter VIII), and parent involvement (Chapter IX). In addition, the evaluation has accumulated information bearing on the operation of the Project and its instructional program (Chapters IV - VII). This information will help to clarify the meaning of the scores, and it may help administrators to make decisions concerning the direction of certain aspects of the bilingual program.

The primary sources of information in this report are 1) standardized tests of achievement; 2) standardized tests of pupil attitude and self-concept; 3) questionnaires completed by instructional staff; 4) pupil cumulative file information; 5) an observational study of instruction conducted last year by Dr. Minaya of the Univeristy of Connecticut; 6) and other records kept by the Instructional Consultants.

Organization and Plan

The evaluation is primarily guided by the CIPP Model which stands for Context, Input, Process and Product. Context evaluation focuses on program background and pupil needs. Input evaluation is concerned with the resources that are allocated to meet pupil needs. Process is concerned with the day to day operation of the educational program. Finally, Product evaluation is focused on assessment of impact, especially in the area of pupil academic achievement.

For the most part, each chapter in the report is devoted to one of these four areas. However the areas of parent involvement and staff development were examined in separate chapters.

Each year the evaluation has gathered somewhat different information with a view to gradually accumulating relevant information about the project. In this the final report certain information from previous reports has been reported again in order to integrate and summarize this information and its implications.

Context Information

Chapter II provides background information on the Project and the school district. Chapter IV analyzes educational entry characteristics of Project pupils, i.e. characteristics which they bring to school with which affects how well they do in school what the schools must do to instruct them. This previously reported information includes kindergarten screening scores and oral language scores, pupil self-concept and attitudes to school and school subjects, and information on pupil attendance and mobility.

Input Information

Chapter V describes aspects of staffing and instructional materials. These include staff organization, experience, teacher turnover, texts, curriculum guides, and subject instructional materials. Information on these subjects is based primarily on questionnaires and records kept by the Instructional Consultants and the district.

Process Information

Three aspects of process have been examined. An observation of Spanish reading and language instructions conducted. Teachers also responded to a questionnaire on the instructional models and on administrative support for the Project.

Product Information & Impact Design

Because of the extent and complexity of testing and its analysis, these results are presented in two chapters. The first of these two chapters, (chapter X) addresses achievement in the primary grades. This chapter included the results of oral language testing Grades 1 & 2, criterion referenced testing of Spanish reading in K-3, and mathematics scores in K and 1. Impact of the pairing model (explained in chapter VI) is included.

One of the major requirements of the evaluation is to estimate the effect of the educational program upon student achievement. For a variety of reasons this is a difficult task, and no single approach to estimating impact that is available is entirely sound. The basic approach taken in Chapter XI is to use several methods and to look for a common result across those methods.

The first method takes advantage of the variation in educational programs before entering the Project among pupils currently in the Project. Many of the pupils were in other programs before joining the project, and some of these were in mainstream English programs. This latter group constitutes a kind of comparison group. Test scores and retention data are to estimate the effect of the Project using this concept.

A second estimate of Project Impact compares Project scores across grades with a similar cross section of Puerto Rican pupils in the same schools who were tested on the M.A.T. in 1979.

Technical information on these designs is in Appendix A.

Instrumentation

The evaluation uses six major sources of data as listed above in the overview. These sources are discussed below. The relationship between these sources and the questions they were used to answer is given in Table III-1.

Measures of Pupil Achievement

Kindergarten and first grade pupils were tested over the past two years in English and Spanish oral language using the Language Assessment Scales (LAS). During the 1978-79 school year, these grades were also tested on a Spanish translation of the Metropolitan Achievement Test Primer level math test.

From the second through the fifth years of the Project, grade 2-6 students were tested in English on the Metropolitan Achievement Test Reading and Math batteries. The 1970 edition was used through 1980, and during the past two years the district changed to the 1978 edition. Testing in English was conducted using a level one step lower than standard procedure. In Spanish, the C.T.B.S. Espanol battery was administered on level. It also tests reading and mathematics. All of this testing was conducted as part of the district wide testing program by the district testing office.

Working with the bilingual office, the testing office, and bilingual curriculum development team, the Project also purchased and administered criterion referenced tests of Spanish reading which were custom made to test the Hartford curriculum. Grades K-3 were tested with the four levels of this battery.

Table III-2 summarizes achievement testing.

Table III-1
Project Adelante Evaluation Design
Areas of Investigation and Sources of Information

	Sources of Information					
Chapter & Topic	Achievement Testing	Affective Testing	Staff Questionnaires	Observational Study	Pupil Cum. Files	Records
IV. Pupil Educational Characteriestics	x	x			x	
V. Staffing & Instructional Materials			x			
VI. Instruction			x	x		
VII. Adminstrative Support			x			
VIII. Staff Development						x
IX. Parent Involvement			x			x
X, XI. Pupil Achievement	x					

Table III-2
Project Adelante
Schedule of Reported Testing

Testing in English

Times of Testing	Instrument (Edition & Form)	Grades	Levels	Subtests
Spring 1980	M.A.T. (1970)	2	Pri II	Total Reading, Total Math
		3,4	Elem.	Total Reading, Total Math
		5,6	Interm	Total Reading, Total Math
Spring 1981-82	M.A.T. (1978,JS)	2	Pri II	Reading, Math, Language
		3,4	Elem.	Reading, Math, Language
		5,6	Interm	Reading, Math, Language
Spring 1981	Language Assessment Scales	K,1	I	English
Spring 1982	Language Assessment Scales	1,2	I	English

Testing in Spanish

Spring 1979	M.A.T. (1970, translated by testing office)	K,1	Primer	Mathematics
Spring 1980	SOBER Espanol	K-3	K-3	-
Spring 1980-82	C.T.B.S.-Espanol	2	C	Total Reading, Total Math
		3,4	1	Total Reading, Total Math
		5,6	2	Total Reading, Total Math

Measures of Attitude and Self Concept

In the first year of the program the Project used the Self-Observation Scales as a measure of several aspects of self-concept. The Project spanned grades K-3 at that time, and the administration of the instrument was limited to grades 2 & 3 in as much as it did not seem to be valid for the lower two grades.

The second year of the Project the TREAT was used at the encouragement of the Office of Bilingual Education working with RMC Corporation in a special project. This attitude to school subjects measure was administered three times to grades K-4. Both the SOS and the TREAT are described in Chapter IV when the scores are presented.

Using norms from the general population scores from both instruments indicated that there were no problems in self concept or attitude to school. This finding and feasibility considerations led us to discontinue the administration of affective instruments.

Staff Questionaires

During the first four years of the Project, Project teachers were interviewed by the evaluator using a semi-structured interview form. During the last year, time dictated the use of a structured questionnaire. A shorter but similar form was also administered to instructional support teachers who worked in the same schools, and most of who directly served the Project. Such teachers were E.S.L. teachers, special education teachers, reading consultants, and art and music teachers. The teacher questionnaires were also administered to the Project's two Instructional Consultants.

The frequency distributions of the responses were scanned for differences among school or among the grade level or group of the respondents. This is not reported in the text unless meaningful differences were found. Responses of the Instructional Consultant were not tabulated with those of school personnel but were reviewed for consistency with teacher responses and comments that would clarify or further explain those responses.

Observational Study

An observational study of the language arts program in the native language was conducted in the fourth year of the Project, and the highlights of that study are reported here.

Pupil Cumulative Files

Pupil cumulative files were used as sources of information on pupil birth dates, attendance, and programmatic history.

Other Records

Partly to serve evaluation needs the Instructional Consultants kept records of parent involvement and staff development activities, including client evaluations of workshops and in-service training.

CHAPTER IV

EDUCATIONAL CONTEXT OF ADELANTE CHILDREN

INTRODUCTION

The present section of the report deals with those characteristics of Project pupils that they bring to school with them that also have important implications for the educational program. This section will discuss pupil mobility rates, attendance, kindergarten screening results, English and Spanish oral language fluency of kindergarteners, and affective characteristics, namely attitudes to school subjects, and self concept.

The data presented relates to the educational needs of the student population, and therefore have implications for the appropriateness of the school program that is being offered.

MOBILITY

Question: What is the mobility of Adelante pupils?

Background

Mobility is a measure of the extent to which pupils stay in one school or move from school to school. It is generally recognized that Adelante and other Puerto Rican pupils in Hartford are mobile. There is a substantial movement between Puerto Rico and Hartford schools, and there is movement among Hartford schools. Statistics collected by the district have been based upon schools; the present data are focused upon the individual pupil in order to refine our understanding of the nature and extent of pupil stability and mobility as experienced by pupils.

Data

Data were collected on Project fourth graders during the 1978-79 school year, namely the number of schools attended and when they first entered Hartford. In recording this information, any period of two months or more that was unaccounted for was assumed to represent a school attended elsewhere. Never the less most of the schools counted were Hartford Schools.

Results

Seventy-five percent (75%) of Adelante fourth graders first entered Hartford Public Schools five or more years earlier. The other one-fourth began their schooling elsewhere. Most of this latter group came apparently from Puerto Rico, and a few transferred from New York or New Jersey.

One fifth of the total (18%) started their schooling in Hartford, transferred out of district and later returned.

Of fourth graders, 37% received their K-4 education in one school. About one half have attended two or three schools. Ten percent have been in four to eight schools.

Conclusions

1. While mobility is high, it is occurring substantially among Hartford schools, and less between Hartford and elsewhere.
2. More than a third of Adelante students have remained in the same school throughout, for five or more years.

Implication

1. These data support the existing policy and trends for standardizing curriculua, texts, placement and promotion procedurers, and report cards, across Hartford schools.

Table IV-1
Project Adelante (1978-79)
Total Number of Schools Attended by Adelante Fourth Graders

Number of Schools Attended	Number of Pupils	%
1	34	37
2	25	27
3	22	24
4 to 8	11	12
	92	100

ATTENDANCE

Question: What is the attendance of Adelante pupils?

Data

The number of absences per 180 day school year is shown in Table IV-2. Data were extracted from pupil cumulative files in the Spring of 1979.

Results

The results vary by grade level. Many children miss 30-40 days per year or even more, expecially in grades 1 and 2. Attendance is better in the higher grades.

In first grade, there are an average of 30 absences per year (nearly one day a week per child). By fifth grade, it is down to 15. Overall average is 22 days per year. Boys are absent about two days more than girls on average.

Conclusions

1. The absence rate is very high, expecially in the lowest grades.

Implications

1. High absence rates make it much more difficult for teachers to provide cohesive instruction and for children to have enough learning time.

Table IV-2
Project Adelante
Absences for 1978-79 School Year
Percentage of Pupils in Each Grade
Absent in Given Number of Days

Grade	N	Number of Days Absent				
		0-9	10-19	20-29	30-39	40 or more
1	136	14.7	18.4	27.2	14.0	25.7
2	90	31.1	28.9	15.6	8.9	15.6
3	71	40.8	25.4	19.7	5.6	8.5
4	70	50.0	20.0	18.6	5.7	5.7
5	67	28.4	40.3	17.9	6.0	7.5
6	18	38.9	22.2	16.7	16.7	5.6

KINDERGARTEN SCREENING

Question: How well prepared are entering kindergartners to succeed in school?

Data

Data are from system-wide kindergarten screening in the fall of 1978 and represent 1) Spanish bilingual kindergarten classes, 2) English speaking pupils in low income schools, and 3) English speaking pupils in middle income schools. The Spanish bilingual kindergarten classes include one Adelante kindergarten and two such kindergartens not in the Project. There scores were not significantly different.

Scores below the 40th percentile identify children 'at risk' according to test authors, and scores below the 20th percentile they consider reliable predictors of subsequent school problems. Data are presented to show the percentage of pupils in each range.

Results

Children in the bilingual classes scored about the same as other low income children in Information Processing and Draw-a-man (non-verbal reasoning). More Hispanics scored in the lower ranges in Control (Fine motor control). This is not of major importance, because it will be rapidly ameliortated. Importantly, half of all the children in bilingual classes enter school in the lowest test range in Verbal Reasoning when tested in Spanish, many more than other groups.

Conclusion

1. A larger portion of the children entering bilingual kindergarten than other populations in the city are entering school with fewer relevant language skills than are usually necessary for acquiring literacy skills in either Spanish or English.

Implication

1. Substantially more instructional time than usually provided will probably be needed for these children for Spanish language development, especially between entering kindergarten and entering the first grade reading curriculum. Additional instructional time devoted to Spanish language development throughout the elementary years would probably also impove reading skills.

Table IV-3

Selected Results of Hartford Kindergarten Screening, Fall 1978

Spanish speaking pupils in bilingual classes

N=107

Percentile Range	Information Processing	Draw-a-man	Control	Verbal Reasoning
0 - 19	15.9%	16.8%	30.1%	49.1%
20 - 39	12.2	22.1	17.7	18.2
40 - 49	4.7	11.5	17.7	8.2
50 - up	67.3	49.6	34.6	24.5
Total	100.1*	100.0	100.1	100.0

English speaking pupils in low income school districts

N=330

Percentile Range	Information Processing	Draw-a-man	Control	Verbal Reasoning
0 - 19	16.7%	19.0%	18.8%	23.0%
20 - 39	9.4	11.8	6.8	11.0
40 - 49	4.5	10.1	10.2	8.2
50 - up	69.4	59.1	64.2	57.8
Total	100.0	100.0	100.0	100.0

English speaking pupils in middle income school districts

N=121

Percentile Range	Information Processing	Draw-a-man	Control	Verbal Reasoning
0 - 19	3.3%	3.1%	11.5%	9.9%
20 - 39	8.3	14.0	8.4	4.8
40 - 49	1.7	10.9	4.6	4.3
50 - up	86.8	72.1	75.6	80.9
Total	100.1	100.1	100.1	99.9

* Due to rounding errors, all totals are not exactly equal to 100.0

ORAL LANGUAGE SKILLS

Question: What are the entry level skills in oral English and Spanish in Project Adelante?

Data

Adelante kindergarteners were tested on the Language Assessment Scales in both English and Spanish in the spring of 1981. These tests rate language fluency on a 1-5 scale; 1 shows a non-speaker or someone with slight fluency; 2-3 represent limited degrees of fluency; and 4-5 represent high levels of fluency. Scores of 1 or 2 in the home language indicate a "late language learner" according to test authors.

Results

At the end of kindergarten, 95% of Adelante children still had skills in English at level 1. Since level 1 has a wide range, this result is consistent with entering with virtually no skills, and showing substantial gains.

In Spanish, over half (59%) of the children are at levels 1 and 2 at the end of kindergarten, and only one-fifth are at levels 4 and 5, or fully fluent.

Conclusion

Nearly all of the Adelante children enter the program at the kindergarten level with virtually no skills in English, and the majority have very limited skills in oral Spanish as well.

Implications

1. Low English scores verify that the children tested are properly placed in a bilingual program.
2. The limited native language skills forecast difficulty in acquiring literacy skills in either language.

Table IV-4

Project Adelante

Language Assessment Scales, May 1981
Percentage of Kindergarten Pupils at Each Level of Fluency

N=91

Level of Fluency	Spanish Language	English Language
1	44.0	95.6
2	15.4	3.3
3	19.8	0.0
4	17.6	1.1
5	3.3	0.0

Note: 1 = non-speaker
5 = fluent speaker

PUPIL ATTITUDES

Question: What is the attitude of Adelante pupils toward school and school subjects?

Data

Adelante pupils were given the TREAT, a test measuring attitude toward nine school subjects in December, February, and May of the 1978-79 school year. Children in grades K-4 were tested, that being the extent of the program in that school year. The test measures attitude toward each subject with five questions, and the child marks a happy, sad or neutral face in response. Scores range from 0 to 10 on each subject. Norms are available for Anglo children only, and these were used for comparison.

Results

Scores on the adjacent page show the Adelante pupils have attitudes as favorable or more favorable than the Anglo norming group. Scores higher than the norm were concentrated in the academic subjects and came more from Burns School. With minor exceptions, scores did not vary significantly with sex, month of testing, or with grade level.

Conclusion

1. With due regard for the possible limitations of this type of test, results indicate that attitudes toward school are in the normal range in the Adelante program.

Implication

1. Results suggest that no additional efforts in the schools or in the classrooms to improve student attitude are needed for this group of children as a whole.

Table IV-5

Attitudes Toward School Subjects measured by the TREAT on a 0-10 Scale

Subject	Project Adelante	Anglo Norm Group	Important Differences
School	6.85	5.50	+1.35
Math	6.57	5.79	-
P.E.	7.83	8.21	-
Music	6.72	6.54	-
Art	7.88	8.23	-
Reading and Speaking English	7.23	Reading 5.60	+1.63
Reading and Speaking Spanish	7.06	Reading 5.60	+1.46
Social Studies	6.70	4.72	+1.98
Science	6.89	6.60	-

STUDENT SELF CONCEPT

Question: What is the self-concept of pupils in Adelante?

Data

Second and third graders in Adelante were tested fall and spring on the Self-Observation Scales. The instrument was developed with norms for the general population.

Self-Acceptance here is qualities of happiness, importance, and competence. Social maturity is independence, persistence, and sensitive to the needs and feelings of others, especially peers. School affiliation is enjoying school and its activities and people. Self Security is having a low level of anxiety and high emotional stability.

Results

All of the reported average scores are in the normal range of the general population. The pre-test score for social maturity was on the low end of the normal range, but improved substantially in the spring. School affiliation scores were somewhat above average.

Conclusions

1. In general the tested program children have similar self-concepts to the general population.
2. Adelante children appear to be more comfortable with school and somewhat less comfortable with their peers than the general population.

Implication

1. The climate and acceptance provided by the Project is quite satisfactory.
2. Any academic difficulties are probably not related to the affective domain in any substantial way.
3. Low Social Maturity scores are probably related to limited fluency in English language, and limited familiarity with Anglo peer behavior styles.

Table IV-6
Pupil Self Concept
Grades 2-3, 1977-1978 School Year
Percentile Scores

Score	Fall (n=110)	Spring (n-132)
Self-Acceptance	50%tile	50%tile
Social Maturity	27	42
School Affiliation	61	65
Self-Security	45	58

Summary

In reviewing the characteristics of Adelante pupils that are related to their education needs, several significant findings have emerged.

1. The affective characteristics that have been measured show Project pupils to be in the normal range with respect to self-concept and attitudes to school. As a group, Project children do not exhibit any special needs in the affective domain according to these tests.

2. The low scores in oral language are a cause for concern. Experience has shown that those children or adults who are skilled at conveying and interpreting information through the spoken word are better prepared to succeed at the more difficult task of using the printed word. These low test scores indicate that the children entering Adelante, and probably other Puerto Rican children entering other bilingual classes in Hartford, have not developed the oral language skills which are usually found in children who progress in reading at the normal rates. Based on these low test scores alone it may be expected that these children would not do well in developing reading skills in either language unless the instructional program first provides substantial extra opportunity to develop these oral skills beyond the opportunity that is usually provided. Chapters X through XII will further expand upon this concern in light of other findings.

3. Difficulties in attaining normal rates of academic process will tend to be increased by high pupil absence rates, especially in the primary grades, and by high pupil mobility rates, expecially among Hartford schools. While the schools may be unable to change attendance or

mobility, continued district effort toward standardizing instructional programs, report cards, etc., across schools will tend to minimize the educational disruption to pupils who frequently change schools.

CHAPTER V

STAFFING AND CURRICULUM

Introduction

An examination of the educational resources or "inputs" is a significant part of any sound educational evaluation. It is important to know whether a program has the necessary resources, and whether those resources are appropriate to the needs of the children it serves. In this chapter and the next there is a particular concern about whether these resources are appropriate to the low entry scores in oral language in the student population. This chapter is presented in two sections. The first is focused upon staffing and the second upon curriculum.

Staffing

Staffing is particularly important because qualified bilingual teachers are less readily available than their monolingual English counterparts, because of changing patterns in the Hartford student population, and because of the use of monolingual English teachers within Project Adelante.

This section considers the number and placement of teachers, and paraprofessionals, including the monolingual English teachers; selected aspects of the training and experience of teachers; and turnover of teachers.

The data in this chapter are drawn from Project files and from interviews with these staff.

INSTRUCTIONAL SERVICES

Question: How many teachers and paraprofessionals served the Project, how many are bilingual, and how are they employed to provide instruction?

Answer

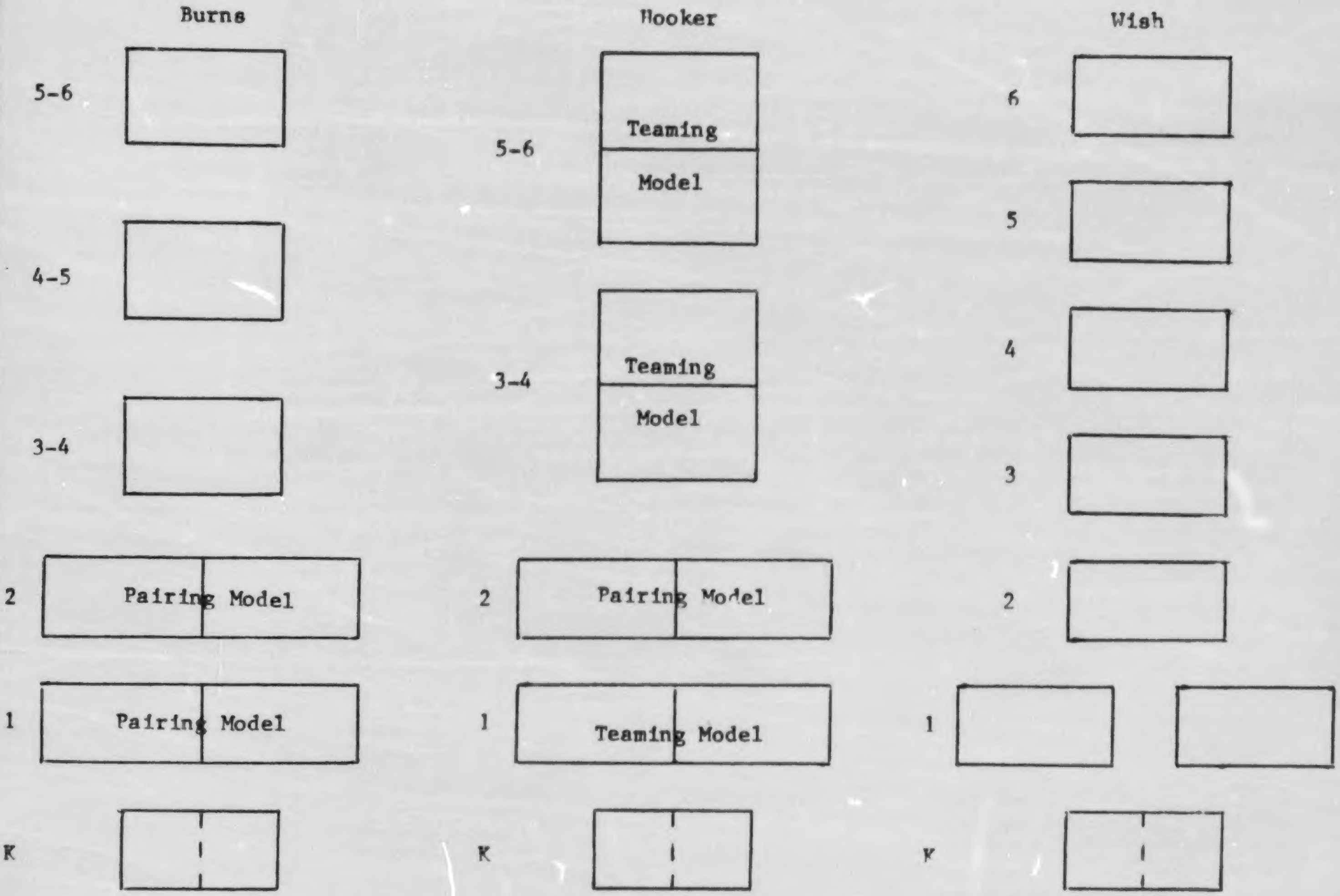
Project Adelante has twenty-five teachers. Burns and Wish schools have eight each, and Hooker has nine. Each school has one kindergarten teacher, each serving two classes. Each school has two first grade teachers, and two of them have two second grade teachers. There is one teacher for each classroom in grades 3-6, except at Burns where three teachers span four grades by using cross-grade grouping.

All but three of the teachers are bilingual, and those three are employed in pairing models in grades 1 and 2. In a pairing model, two classes of children are taught jointly by a monolingual English teacher and a bilingual teacher, one teaching English, and the other Spanish. There will be more discussion on the pairing models in later chapters.

Wish School overall has eight self-contained classes. Hooker has a self-contained kindergarten. Its first grade is a teaming model with two bilingual teachers, but the arrangement resembles a pairing model in that the instructional tasks are partly divided along language lines. The second grade is a pairing model. The intermediate grades are organized into two teaming models also resembling pairing models. Burns School has pairing models in grades 1 and 2, and the remaining classes are self-contained.

All of the K-2 classes have paraprofessionals provided by the district with the exception of one class at Wish. This para was lost and not replaced. In addition, Project funding provides one additional para in each school that serves in the intermediate grades, for a total of 16 paraprofessionals. Nearly all of the paraprofessionals have been bilingual over the five years of the Project.

Table V-1
Project Adelante
SCHOOL ORGANIZATION OF
ADELANTE TEACHERS AND CLASSROOMS



Burns
Hooker
Wish
5-6
4-5
3-4
2
Pairing Model
1
Pairing Model
K
5-6
Teaming
Model
3-4
Teaming
Model
2
Pairing Model
1
Teaming Model
K
6
5
4
3
2
1
K

Adelante Teacher Experience

Question: How experienced are teachers and paraprofessions in Adelante?

Data

Twenty-six Project teachers were interviewed in the spring of 1981, and in 1978.

Results

From the 1978 interviews, the median teaching experience was six years, with most teachers having between 3 and 10 years experience.

Of the 26 teachers in the Project in 1981, five (16%) were new to teaching when they joined the Project. Of the experienced teachers, four (19%) were new to bilingual education, and three of these were monolingual English teachers working for the first time in a pairing model.

Based on interviews in 1981, paraprofessional had a median of six years experience in Hartford, and a median of three years with the Project. While about a third of those interviewed did not have high school equivalency, the others had accumulated college credits. Some of these had over thirty credits or a year of college education. One earned a B.A. this year.

Conclusions

1. The Adelante teaching staff has a core of teachers with substantial experience in the classroom, with about one-third new to teaching when they enter or new to bilingual education.

2. The paraprofessionals have similar experience levels to the teachers, and a range of educational level.

Implication

The Project has had the foundation for providing a sound instructional program but enough new staff to make a continuing staff development program such as the Projects has been providing important.

Turnover of Adelante Teachers

Question: What is the extent of teacher turnover in Project Adelante?

Data

Records of the Project's Instructional Consultants previously reported in 1981.

Results

Of the twenty-six teachers in the Project in 1981, 14 (53%) have been in the Project since their position started, but only five of these were with the Project in the first year. A total of 45 teachers have occupied the now twenty-six positions, including four long term substitutes.

The twenty-six positions have an average life span of 2.9 years (as of 1981) while the average longevity of teachers in them (excluding subs) has been 1.8 years. Each position has had an average of 1.6 teachers in it. The greatest turnover has been in grade one, though this appears to have been a coincidence. Informal information indicates that turnover is for personal reasons for the most part.

Differences in turnover among the three schools are negligible.

Conclusion

1. Teacher turnover is substantial, and has shown a concentration in grade 1.

Implication

1. Turnover weakens the ability of the Project to provide continuity of instruction, and it increases the need for staff development efforts.
2. Turnover in grade 1 is a matter of concern even though it seems to be a coincidence. Analysis of pupil needs suggests that grade 1 is even more critical for these children than usual.

Table V-2
Project Adelante Teacher Turnover by Grade Level
(1981 Data)

Grade Level	Number of Positions	Number of Teachers	Teachers per Position
K	3	4	1.3
1	6	14	2.3
2	5	8	1.6
3	3	6	2.0
4	3	5	1.7
5-6	6	8	1.3
Total	26	45	1.6

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EXPERIENCE OF GRADE 1 TEACHERS

Question: What is the experience of Project Adelante first grade teachers at the time they join the Project with respect to teaching in the primary grades and with respect to teaching in bilingual classrooms at the time they join the Project?

Data

Data were obtained from the files of the Instructional Consultant for staff development. Complete data were available for twelve of the fifteen bilingual teachers that served the Project in the first grade. Those with imcomplete data were young teachers who did not have extensive experience. Two may have been new teachers.

Results

Eight or two thirds of the teachers who have served the Project in first grade had at most one year experience teaching the primary grades. The same number and percentage were inexperienced in bilingual education.

Six of the twelve teachers had experience in neither area of more than a year. Of these, three were new teachers, and one had taught five years in other settings. Of all these teachers, only two were experienced in bilingual education at the primary level.

Conclusion

1. Through out the Project most of the first grade classes have had teachers with little or no experience at the primary level or in bilingual education at the time they entered the Project.

Implication

1. Low entry skills make the first grade for these pupils even more important than usual. While school administrators have little control over teacher turnover and rarely have the opportunity to hire bilingual teachers with experience, they should be alerted to the coincidental patterns of limited teaching experience in this critical grade in order to focus their priorities and to make the best use of experienced staff currently in the system.

Table V-3
Experience of Project Adelante Grade 1 Bilingual Teachers Upon Entering Project

		Primary Education	
		0-1 yrs	2 + yrs
Bilingual Education	0-1 yrs.	6	2
	2 + yrs.	2	2

Incomplete data - 3
Monolingual - 1

Introduction to the Evaluation of the Curriculum

The present section asks three broad questions about Project curriculum: 1) Do teachers perceive the processes for placing and monitoring the progress of pupils in the Project as adequate? 2) Do teachers perceive the curriculum guides and instructional materials as adequate? 3) Is the curriculum adequately adapted to the special learning needs, i.e. low language skills of Project pupils?

Since the processes that govern pupil placement and monitoring directly affect the instruction they receive, these processes are appropriately seen as an important aspect of curriculum. The perceptions of Project teachers about these procedures provides some perspective on their effectiveness and appropriateness in practice. These perceptions are also obtained through questionnaire items.

In its first year the Project recognized that the curriculum guides were out of date. Working with Project teachers and the district bilingual curriculum development team, work began in the second year to bring improvements. The following year the district mainstream curriculum team was reactivited after several years of inactivity. It took the initiative in this area with continued but reduced support from the Project and its teachers. The perceptions of Project teachers with respect to curriculum guides obtained from questionnaire items therefore reflects upon a sustained effort by the district and the Project to update and improve the curriculum guides and therefore instructional practices.

Project Adelante has had a part of its budget allocated to instructional materials. Per regulations these funds have been used to purchase Spanish language materials and other items that do not supplant the district general budget. The Project has allocated larger sums to establish classrooms when they are added to the Project and smaller annual sums to each classroom for the purchase of materials. In the past two or three years, the school system has also made a concerted effort to assess the need for texts and to purchase texts as part of the broader effort to standardize curriculum. The goal of a text for each child in the major subjects was established, and several cycles of needs assessment and purchases was undertaken. These purchases were coordinated with Project efforts. At a stage when most of the deliveries should have been made, broad survey questions concerning the adequacy of text and classroom materials were posed to Project teachers.

In examining the appropriateness of the curriculum to the special needs of this student population, the evaluation considers both the curriculum as designed and as received by pupils. Design considerations here include the overall intent of the curriculum and the distribution of Spanish language instructional objectives between the oral and written domains. Received instruction involves consideration of several factors affecting the allocation of instructional time between the oral and written domains.

PUPIL PLACEMENT AND MONITORING

Question: How do teaching staff rate the procedures for placement and monitoring, and the consistency with which they are being followed?

Data

Four questionnaire items were administered to twenty teachers, sixteen instructional support staff, and Project Instructional Consultants. Eleven instruction support staff who responded "Don't Know" were not included in the tabulation, to avoid the appearance that too many persons who should know did not know. Only certain persons outside the bilingual classroom would ordinarily be familiar with these procedures.

Results

Forty-two percent (42%) rate the procedures overall as "Good" or "Excellent." An equal number rate them "Fair" or "Poor," and the remainder "Don't Know."

The consistency with which the procedures are being followed (Item 4) are rated lower than the design of the procedures. In question 4, 51% responded "Fair" or "Poor."

Three teachers said in written comments that teachers rated pupil skills differently due to the absence of a standard measure. Another commented that "Secretaries are making placement decisions." (It should be noted that temporary and tentative placements frequently have to be made in the absence of test scores and teacher experience. The problem here is not the process but the teacher appreciation of it.) Another teacher wrote that the monitoring procedures don't "fit well with report cards." (The technology of bilingual measurement is still preliminary and based on a linguistic rather than an educational model. This comment is accurate but the problem would not be easy to solve.)

Conclusions

1. Teachers seem to be reasonably satisfied with the design of the procedures, considering that they are a paperwork burden.

2. Teachers perceive some inconsistency in the operation of these procedures. The absence of objective tests of pupil skills may be a factor.

Recommendation

The bilingual curriculum development team should continue working on the development of criterion referenced tests to assist in placement and monitoring. See also discussions on this in Chapter XII.

Table V-4
Project Adelante
Staff Perceptions of Monitoring & Placement
(Percentages of 25 Respondents)

1. If consistently followed, the procedures for selecting new children into the Adelante program (summarized in Form B-2) could best be rated as:

Excellent	Good	Fair	Poor	Don't Know
0%	44	28	12	16

2. If consistently followed, the procedures for monitoring pupils in Project Adelante (summarized in Form B-4) could best be rated as:

Excellent	Good	Fair	Poor	Don't Know
4%	48	12	20	16

3. If consistently followed, the procedures for exiting pupils from the Adelante program (summarized in Form B-2) could best be rated as:

Excellent	Good	Fair	Poor	Don't Know
0%	41	26	19	15

4. The consistency with which the above procedures are being implemented in my school can best be rated as:

Excellent	Good	Fair	Poor	Don't Know
0%	30	44	7	19

Average of Items 1-4:

Excellent	Good	Fair	Poor	Don't Know
1%	41	28	14	16

INSTRUCTIONAL MATERIALS: CURRICULUM GUIDES

Question: Have teachers received in-service training on the curriculum guides? How do teachers rate the adequacy of the curriculum guides?

Data

Twenty of twenty-five teachers responded to a questionnaire.

Results

Averaging across all the subjects for which questions were asked, an average of forty-nine percent (49%) of teachers reported that they had received in-service training on the guides for reading, language arts, mathematics, science, and social studies. One-fifth on average had not been in-serviced, and slightly less than a third (31%) reported that the particular subject was not applicable in their current role.

Over half (57%) rated the guides as "good" or "excellent," and most of the remaining respondents rated them"fair." A fifth (22%) did not know or did not respond or said "not applicable."

Conclusions

1. Most of the teachers are familiar with the guides, and rate them favorably.

2. A significant group of teachers are not currently familiar with the the guides apparently because their current role does not involve them with all the subjects.

Implication

1. Efforts in development curriculum appear to be sucessful in the eyes of Adelante teachers who use them.

2. Those responsible for staff training with respect to the curriculum guides will need to keep in mind that the pairing and teaming models permit some teachers to lose contact and familiarity with some of the subject areas. Such teachers will need to be retrained as they are assigned to some other role.

Table V- 5
Project Adelante
Teacher Perceptions of Curriculum Guides
(N=20)

12. As new and revised curriculum guides have been introduced, in-service training sessions have been conducted to acquaint teachers with them. Please indicate below the guides for which you have received such training this year or last year:

Guide	In-Service	No In-service	Not Appl
Reading	Yes	No	N/A
	45%	25%	30%
Language Arts	Yes	No	N/A
	45	15	40
Mathematics	Yes	No	N/A
	45	25	30
Science	Yes	No	N/A
	60	10	30
Social Studies	Yes	No	N/A
	50	25	25

13. Please circle the term which best describes your rating of each guide:

Reading	Excellent	Good	Fair	Poor	N/A
	10%	45%	15%	5%	25%
Language Arts	Excellent	Good	Fair	Poor	N/A
	20	45	15	0	20
Mathematics	Excellent	Good	Fair	Poor	N/A
	10	65	10	0	15
Science	Excellent	Good	Fair	Poor	N/A
	5	50	25	0	20
Social Studies	Excellent	Good	Fair	Poor	N/A
	5	30	25	10	30

INSTRUCTIONAL MATERIALS: BOOKS AND OTHER PPLIES

estions: Do classrooms have texts in each subject and language as needed?

Are instructional supplies and equipment available in adequate quantity?

Data

Twenty teachers responded to two questionnaire items written to obtain a general appraisal of classroom materials. Since most of the respondents are in the primary grades or teach in cooperative models, many responded "Not Applicable" meaning that the particular subject was not taught in the particular classroom. The number of such responses is consistent with which teachers responded. The substance of the question is addressed by those making one of the other two responses.

Results

With respect to Spanish language texts, 70% of responding teachers reported enough texts in reading, and over half of teachers have enough in mathematics. A third said they have enough in science and social studies. Sixteen sets of texts were said to be needed, mostly in science and social studies.

With respect to texts in English, only four classes reported having enough texts, and those were in reading and math. No one reported having enough texts in science or social studies. Thus at least one teacher reported needing more texts in each of the eight major subjects.

Since the curriculum office expected needs to be largely filled at the time of response, the significance of the data is that it seems to call into question some aspect of the process by which books were ordered and delivered. It should be noted however that the item was not written for so specific an intent and could be misleading. Assuming that the responses are substantially accurate, they could be explained by confusions to the system for ordering books caused by cooperative teaching, cross-grade grouping, by increases in the number of pupils, or by purchases not delivered or not delivered to teachers.

Sixty percent (60%) of responding teachers reported that the availability of their instructional supplies and materials is good or better.

Conclusion

1. Although there are limitations to the questionnaire item, teacher responses seem to be discrepant with system purchases for meeting goals on textbooks.

Recommendation

1. A status check in a sample of classrooms in the fall is suggested with respect to the supply of texts.

Table V-6
Project Adelante
Teacher Perceptions of the Need for Texts and other Instructional Supplies

14. Each child should have a text book in each of the following subjects. Please indicate whether you have enough texts to meet this goal, how many are needed to meet this goal, or that the subject is not taught in your present classroom.

Spanish

Reading	Have enough 70%	Need more 5%	N/A 25%
Mathematics	Have enough 55	Need more 15	N/A 30
Social Studies	Have enough 35	Need more 30	N/A 35
Science	Have enough 35	Need more 30	N/A 35

English

Reading	Have enough 30	Need more 15	N/A 55
Mathematics	Have enough 10	Need more 10	N/A 80
Social Studies	Have enough 0	Need more 15	N/A 85
Science	Have enough 0	Need more 15	N/A 85

15. The availability of other instructional supplies and equipment in my room is:

Excellent	Good	Fair	Poor	Absent	No Answer
20%	40%	30%	5%	0%	5%

CURRICULUM ADAPTATION

Question: Is the Spanish language curriculum appropriate to the needs of the Adelante population?

Data

The number of curriculum objectives within each of the three broad areas of Spanish language arts curriculum has been taken from the 1980 Spanish language arts pupil curriculum record form.

Results

The intent of the Spanish language curriculum including all subjects is to be parallel with the English language curriculum with respect to both content and grade level expectations insofar as the similarities and differences between Spanish and English language permit. In reading and language arts, the curricula in both languages are structured on the assumption of normally distributed levels of language skills in the student population. Thus the two curricula as reflected in the curriculum guides are similar with respect to content and grade level expectations to that found in many school systems. The adjacent data reflect the fact that traditional emphasis is predominantly upon the written rather than the oral language domain. While instructional objectives are not necessarily of equal importance or comsume equal time for instruction, the tabulation of the number of objectives in the oral and written domains reflects the distribution of emphasis that would be expected in the absence of any special knowledge about the student population.

Several factors can be inferred to affect the amount of instruction that will be found to be allocated to the oral and written domains. In kindergarten, there is a half day of instruction, and about one third of it is devoted to English by means of a pull-out E.S.L. program. Thus the amount of time left for Spanish is less than is normally available to children with average skill levels in monolingual programs. Recently the alpha-phonics program has been introduced into the kindergarten. This program is oriented toward reading skills. Other things being the same, its introduction can have the effect of encouraging teachers to move toward the introduction of pre-reading skills despite the absence of the linquistic prerequisites. Though this outcome is not necessary, it seems possible unless teachers are carefully trained on this issue.

In grade 1, the teacher is almost certain to have high expectations of introducing a reading program; that is what first grade teachers are expected to do by almost everyone. This may make it difficult to allocate the amount of time and effort to bringing up oral language skills that are in fact needed by most of the pupils in order to succeed. In addition, the presence of the pairing model in some schools will provide only half of a day in Spanish instruction with which to do both remedial oral language and reading related activities. Furthermore, the Spanish language texts do not provide as much emphasis on oral language development as do the standard texts in English.

Conclusion

1. It appears that Project pupils are probably receiving less than the intended amount of instruction in Spanish language oral development when their entry level skills indicate that they need more than is intended.

Recommendation

1. Some strong structural changes are needed in order to bring more instruction in oral Spanish to many of the Adelante student population. Specific suggestions will be articulated in Chapter XII.

Table V-7
Distribution of Oral and Written Objectives
in Hartford Spanish Language Arts and Reading Curriculum

Grade	Domain					
	Oral		Reading		Writing	
K	8		7		8	
1	9		12		10	
2	8		15		12	
3	8		11		20	
K-3	33	25.8%	45	35.2%	50	39.0%
4	9		10		19	
5	6		9		18	
6	7		6		17	
4-6	22	21.8%	25	24.8%	54	53.4%
K-6	55	24.0%	70	30.6%	104	45.4%

Summary

The chapter has examined aspects of staffing and curriculum. A review of the records show that the Project has had a core of experienced and trained bilingual teachers and paraprofessionals serving the Project. However, there has also been considerable turnover among bilingual teachers, with two implications. First there is a continuing need for staff development effort to integrate new staff into the Project. Second, turnover has coincidentally affected the first grade the most, which is particularly critical because of the low entry skills of Project pupils. Administrators responsible for hiring and placement should therefore keep in mind as much as possible the need to find and keep experienced bilingual teachers in the first grade of bilingual programs.

While the Project has recently updated curriculum guides, several indications are that Project children who need more oral language development in Spanish than is intended by this curriculum are probably getting less than intended. Recommendations for some changes in this area are provided in Chapter XII. Teacher responses to a questionnaire item on the number of texts seems discrepant with the understanding of the situation in the curriculum office. A check on this apparent discrepancy after final textbook deliveries may be worthwhile.

CHAPTER VI

INSTRUCTIONAL PROCESSES

Introduction

The chapter recapitulates the finding of a classroom observations study of which observed Spanish reading instruction and it obtains teacher perceptions of the working of the pairing and teaming models at two schools by means of a questionnaire.

Observational Study of Instruction

Dr. Minaya of the University of Connecticut was asked to observe several of the Adelante classrooms in the spring of 1981. She is a specialist in reading, language acquisition, and teacher training in bilingual education. There were two specific purposes for this study: 1) to provide general information on the instructional process for the evaluation; and 2) more specifically to explore for possible reasons for the pattern of low achievement and high retention rates that had been observed in previous evaluations. To accomplish this second purpose it was decided to conduct more lengthy observations in fewer classrooms, and to select classrooms with experienced teachers that exemplified the general intent and approach that the Project and district were using. Grades K-3 at Hooker School were selected as the most feasible example of these conditions.

CLASSROOM OBSERVATION STUDY

Question: What are the judgements and observations of a trained and independent observer with respect to the effectiveness of instructional processes in Spanish reading in grades K-3 in Project Adelante?

Data

Dr. Minaya's report was previously given in its entirety in the 1981 evaluation. Excerpts of the conclusions in major areas are given below. Following those excerpts are summaries of other observations and conclusions given orally to the Project.

Results

Methods of Reading Instruction in Spanish

". . . The teachers seemed comfortable and showed a good command and use of methods of reading instruction, both synthetic and analytic. . . . The teachers did well at selecting certain features of synthetic methods for stressing and explaining parts of words, and/or focusing on how the writing system works . . . Gradually however, the teachers . . . stressed comprehension of written materials. Furthermore I noticed that teachers work individually with pupils (and) showed great attention and concern for the students learning modalities.

"Therefore, I concluded that the application of methods of reading instruction is exemplary in the classrooms and schools I visited."

On the use of reading materials in Spanish

". . . teachers showed they were well-acquainted with the reading materials, principally, the textbooks and the workbooks. They seemed to be at ease using them as instruments to accomplish determined instructional objectives . . . the books used in class . . . were 1) adequate for the students' maturity level, knowledge and cultural and linguistic background experience; 2) in agreement with techniques of teaching methodology and pedagogical theory; 3) efficient in the pictorial presentation; and 4) applicable to the activities, sequences and processes stated in the instructional objectives of Project Adelante.

"I conclude that both the selection and utilization of reading materials have been efficiently done in the classrooms I visited with the exception of (certain supplementary materials for reading readiness)."

Oral English in the Adelante Classroom

"I observed two oral English development classes. To the extent that these observations are representative, the Adelante Project is using up-to-date ESL methods and techniques and good English language models for children."

Spanish Language Development

". . . Considering low language entry skills and the strong reading program, it seems to me that Spanish or all language development may not be receiving enough time and emphasis before the onset of the reading program and during its early phases."

Other results

In addition to the adjacent observations and conclusions, Dr. Minaya related orally several other observations and conclusions:

1. There was a coherence and planfulness within the reading program that was probably attributable to the staff development efforts of the Project.
2. The paraprofessionals were very effective in support of the instructional program.
3. There seemed to be an effective communication network among staff.

Conclusions

1. The study found the Spanish reading program to be strong with respect to the application of instructional methods and with respect to the selection and use of instructional materials.
2. The study found the E.S.L. instruction to be strong with respect to instructional methods and with respect to the quality of English modeling.
3. The study therefore inferred that low scores in reading may be attributable to insufficient instructional time in Spanish oral language development.

The Cooperative Teaching Models

Purpose of Cooperative Instruction

Teaming and pairing models are generally created for one or more of three chief reasons: Better staff utilization, better grouping for instruction, or administrative control of the time allocated to specific instructional areas. The pairing model permits and appropriate use of a monolingual English teacher who could otherwise not be gainfully used with the target children. This may be valuable because of a shortage of bilingual teachers, or because pupils will get better English language modeling. In teaming models which use two bilingual teachers the teachers are used on a departmental basis or a linguistic basis and this arrangement can capitalize on the different strengths among the cooperating teachers.

In both teaming and pairing the students in two classes can be divided in such a way that there are fewer reading groups in one class at one time, and more students in each group; this permits more individualized instruction to be done. However, improving grouping for one subject may make the grouping worse in another depending on the circumstances.

In any elementary school situation there is a certain amount of variation from teacher to teacher in how much time is allocated to particular subject areas. The teaming and pairing models place certain constraints on this variation by departmentalizing the instruction either by subject area or by language. This also has the effect of reducing teacher preparation time as well.

Description

The pairing models divide instruction on the basis of language. The Spanish teacher will teach Spanish language arts and reading, social studies and science, and depending on grade level will also be introducing math. The English teacher teaches E.S.L., English reading except at the lowest grade levels, and reinforces instruction in math, science and social studies if the level of oral English is sufficient. As children progress the English teacher will begin to introduce the content area subjects in English.

In the grade 1 teaming model one teacher provides Spanish language arts and reading, and social studies. The other teaches E.S.L. and math and science in Spanish. The upper grade teaming models provide Spanish language arts and reading and social studies and science in one classroom, and the other provides E.S.L., English reading, and mathematics, the latter being taught primarily in English. With respect to allocating time to English, the upper grade teaming models resemble pairing models.

Evaluation

The present section examines teachers perceptions of the working of these models with a view to further elucidation of the concerns with meeting pupils needs that have been touched upon in each chapter.

In addition, the use of cooperative teaching creates a need for extra effort in the areas of communication, coordination, and planning; it is important to be sure that the movement of children and the separation of planning and instruction between teachers does not create more problems than it solves.

INTENT OF THE COOPERATIVE TEACHING MODELS

Questions: What do cooperating teachers see as the purposes of cooperating instructional models?

Do teachers see those purposes as accomplished?

Is the movement of children between classes successful?

Data

Eleven of the twelve cooperating teachers responded to one open and two structured questionnaire items. In Question 1 teacher responses have been classified by the evaluator. In the other items teacher comments are given as written with some changes for clarity or brevity.

Results

The teaming models pointed to better grouping as the chief reason for the models, while the pairing models responded most frequently about the time structure. Two teachers mentioned the flexible use of staff which the models afford. Other purposes cited were either very general or are listed under question 11 later.

All of those who responded to the question on the accomplishment of these purposes said that they were completely or nearly accomplished. Hooker teachers cited scattered reasons for less than complete accomplishment: Too many levels due to student's not working at grade level; classes too large; too many pullouts, and lack of staff support.

Ratings of the physical movement were similar at both schools. One of the models has the two classrooms on different floors, and may have instigated both of the critical comments.

Conclusion

1. Teachers see purposes consistent with the nature of the models, and they see the purposes being largely accomplished in practice, despite some scattered concerns.

Table VI-2
Project Adelante Teacher Responses to Questionnaire Items on Cooperative Teaching (Part 1)

1. Please state the main reasons or purposes why you think the model was originally formed (for instance to do more effective grouping).

Better instructional grouping	5
Structured allocation of instructional time	5
To be able to use monolingual English teachers	2
Other	4

9. In your opinion, have the purposes you listed in Item 1 above been adequately accomplished?

Completely	2
Nearly	7
Somewhat	0
Not at all	0
No response	2

- Children from 2 classes are receiving ½ day of Spanish and ½ day of English (B)
- Received many students that were not on the required reading level. Had toom many reading levels. (H)
- Need to consider teacher's attitude; teacher's involvement; motivation by administration; communication with other staff members. (H)
- All the students learn to read. Almost all parents have been interested in their child's progress. Pupil problems include family problems, health and attendance. (H)
- Too many pullouts from the regular classroom (H)
- Class size too large (H)
- Range of reading levels too varied (H)

4. In your opinion, how well does the physical movement of children between classes work?

Excellent	1
Good	6
Fair	3
Poor	0
No response	1

- Both teachers should be on the same floor. (H)
- Could be better if the teachers would supervise it. (H)
- Not much distraction since classrooms are across the hall from each other. (H)

PLANNING TIME IN THE COOPERATIVE MODELS

Question: Is there enough time for planning and evaluation for the teachers and enough support from the school administration as perceived by teachers?

Background

Teachers have indicated that they are in almost daily contact with their partners for short meetings to keep their instructional planning coordinated. However, these models may also create a need for longer meetings as well for strategic planning of instruction, handling children with special problems, preparing report cards and parent conferences, and reviewing the operation of the model generally. However it may be difficult or impossible to schedule meeting time during the school day without reducing the amount of instruction, and it may not be possible after school either. Several items pursue perceptions of meeting time.

Data

Eleven of the cooperating teachers responded to 4 structured questionnaire items.

Results

About half of the cooperating teachers meet at least weekly for at least a half hour at a time; the other half of teachers meet less frequently, some as rarely as once in the first six months of the school year. In questions 6 & 7 about half of the teachers report that they have enough meeting time (which according to one comment is after school), and the other half have no time or not nearly enough time as they see it. Responses are similar at both schools.

Teachers at the two schools differed in responses about administrative support for the cooperative models. Burns teachers all said they had enough support while Hooker teachers were divided. Half felt they had enough time and support from the administration in connection with these models, and half did not. It should be noted however that the administration has been active in arranging and modifying these models for several years.

Conclusions

1. The staff seem to be divided with respect to meeting time questions. About half have regular "long" meetings and they are satisfied with the amount of meeting time. The other half are meeting less frequently and are largely those who see a need to meet more frequently for longer meetings.

2. Burns teachers report they are satisfied with the amount of time and support from their administrators.

3. Although the Hooker administration has shown "support" by authorizing the cooperative models and by making periodic changes in them, half of the staff has nevertheless indicated a need for more time and support from the administration in connection with these models.

Table VI-3
Project Adelante Teacher Responses to Questionnaire Items on Cooperative Teaching Models (Part 2)

5. How frequently have you met with your teaching partner for more than a half hour at a time during this school year?

Constantly	2
Weekly	2
Monthly	1
Less than monthly	5
No response	1

6. Overall, have you had enough time to meet with your teaching partner for planning purposes?

More than enough	1
Enough time	3
Nearly enough time	2
Not nearly enough	4
No time	1

- After school planning time.
- We would like to have expanded social studies and science reinforcement but could not for lack of time for planning.

7. Overall, have you had enough time to meet with your teaching partner for problem solving and teaming evaluation?

More than enough	0
Enough time	3
Nearly enough time	4
Not nearly enough	4
No time	0

8. Overall, how much time, support, and supervision have you had from your supervising administrator with respect to the teaming or pairing model?

	Burns	Hooker
More than enough	-	-
Enough time	4	2
Nearly enough	-	1
Not nearly enough	-	3
No time or support	-	-
No response	-	1

STRENGTHS AND PROBLEMS OF COOPERATIVE TEACHING MODELS AS EXPERIENCED BY TEACHERS

Question: What strengths and limitations have been experienced by teachers in the working of the cooperative teaching models?

Data

Teachers responded to two open questionnaire items. Responses are partly edited for brevity and clarity.

Results

With respect to advantages or experienced strenghths, teachers cited less preparation time (3) and more time to work individually with pupils because of the improved grouping. A number of teachers also saw an advantage in working with another teacher, or saw having two teachers an advantage for children. Several other miscellaneous advantages were also seen.

Disadvantages or problems encountered most frequently were residual grouping problems (4) and scheduling problems associated with pull-out services and specials (3). There were conflicting reports at Burns of wrong linguistic emphasis in the pairing models, with teachers wanting either more English or more Spanish, or seeing the English interfering with the Spanish for those having English in the morning. Other problems related to insufficient planning time (2) and insufficient texts or supplementary materials (2), excessive paperwork connected with the minimum competency tests, large class size, and the segregation of pupils from the rest of the school.

Conclusions

1. Teachers cited advantages and disadvantages about equally.
2. Most frequently cited advantages included less preparation time for teachers and better individualization of instruction. Having two teachers work together was seen as beneficial for both staff and students.
3. Cited disadvantages were numerous yet scattered and without any real consensus.
4. Most frequently cited disadvantages were continued grouping problems and scheduling problems associated with ESL and "specials."

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Table VI-4
Project Adelante Teacher Responses to Questionnaire Items on Cooperative Teaching Models (Part 3)

10. What other strengths or advantages has the working of the model demonstrated?

- Gives one the opportunity to work with another teacher.(3)
- Better because teachers have to be prepared in fewer subjects. (3)
- We have more time to work individually with kids. (3)
- The privilege that the students have been able to have two different teachers that speak different languages. (2)
- Most of the children are making good progress in Spanish and English.
- There is a clear division between Spanish and English teaching. The students get reinforcement of Math, Science, & Social Studies.
- Children become more flexible in dealing with different teachers, methods, and learning modes, perhaps more independent and resourceful.
- Children in a pairing model were not completely segregated from Anglos.
- It can really work if the students are divided according to their reading levels.
- Children have more exposure to English than on a pull-out basis.

11. What problems or limitations with the model have you experienced?

- Extensive reading levels in Spanish.
- It is not effective with groups of 20 or more.
- Some grouping create special planning and instructional problems for a few students on another level.
- Not enough time with the class with five groups.
- Scheduling in specials is confusing to administrators and special teachers who don't know which room the kids are in.
- Too many ESL pullouts and interruptions (2)
- The group that has been with the English teacher all morning has more trouble adjusting to a class in Spanish.
- Students that are academically low do not get enough Spanish instruction.
- Many children are ready to begin work on English reading readiness but are not permitted to do so in the philosophy we follow.
- We lost many teaching minutes every day changing classes and preparing for the change.
- Changes have to be continually supervised when the teachers are not on the same floor.
- English teacher is not given enough texts in math science and social Studies.
- Supplementary materials.
- Not enough planning time with partner (hardly any free time during day)(2)
- Excessive amount of paperwork on minimum competency tests.
- Class size.
- Pupils usually interact with classmates, not whole school.
- New teaching partner each year that is inexperienced.

Summary

An observational study primarily of Spanish language arts instruction was conducted by an expert external to the system. She concluded that the Spanish reading program was strong with respect to the application of instructional methods and with respect to the selection and use of materials. The study inferred that the low reading scores may be attributable to insufficient instructional time in oral language development. An E.S.L. class that was observed was seen as strong with respect to instructional methods and the quality of English language modeling.

Teacher perceptions of the pairing and teaming models were obtained. They saw the purposes of the models consistent with the nature of the models, and those purposes being largely accomplished. Nevertheless they also cited many reservations. About the half of the teachers involved felt a need for more planning time. Despite the fact that the presence of the models reflects administrative support and concern, about half of those at Hooker saw a need for more support in this area. While cited disadvantages were not supported by consensus, it nevertheless seems noteworthy that several teachers cited continued grouping problems and problems related to the scheduling of the various pull-out services. Overall, teacher repsonses show ambivalence about cooperative teaching. See also Chapter XII for further analysis.

CHAPTER VII

PERCEPTIONS OF ADMINISTRATIVE SUPPORT

Introduction

The chapter describes three aspects of administrative support: supportiveness of school administrators, leadership and decision-making, and communications and teamwork among staff. To investigate these areas, ten questionnaire items were administered to Project teachers and selected instructional support teachers in the schools.

SCHOOL CLIMATE & ADMINISTRATIVE SUPPORT

Questions: To what extent are school administrators, instructional support staff, and the Adelante Project Staff familiar with the problems faced by bilingual teachers?

To what extent does the school climate make Adelante children feel 'at home' and encourage parents to visit the school?

Data

Three questionnaire items were administered to 20 Project teachers and two Instructional Consultants and the last two of these were administered to 16 instructional support teachers. N=20 for item 7 and N=36 for items 8 and 9.

Results

Teachers rated the familiarity of administrators, instructional support staff, and school administrators with the problems they face as satisfactory of all of these groups. Within this range, the Project Adelante staff were perceived to be most familiar (they are content area specialists), and the school administrators were seen as the least familiar of the three groups. Several teachers commented that the two building administrators had different levels of familiarity and provided different levels of support for the program. (This situation is undoubtedly common to those bilingual schools having one bilingual and one monolingual administrator.)

Teachers and instructional support staff perceive the school climate for Adelante pupils and parents as being satisfactory, with the climate for students being seen as significantly better than that for parents.

Conclusions

1. Teachers rated the familiarity of school Administrators, Project Adelante, and instructional support staff as good.

2. Teachers and instructional support staff rated the school climate for students in Project Adelante and their parents as good.

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Table VII-1
Project Adelante
Perceptions of Administrative Support
(Percentages of Respondents)

7. The familiarity with the problems Adelante teachers face on the part of the groups below can best be rated as:

School administration:

Excellent	Good	Fair	Poor	Don't Know
10%	55	25	5	5

Project Adelante Director & Instructional Consultants:

Excellent	Good	Fair	Poor	Don't Know
30%	50	20	0	0

Instructional Support Staff in my school:

Excellent	Good	Fair	Poor	Don't Know
15%	65	15	5	0

8. For making Adelante pupils feel "at home" the climate and attitudes in our school can best be rated as:

Excellent	Good	Fair	Poor	Don't Know
19%	50	8	3	11

9. For encouraging Adelante parents to visit school, the climate and attitudes in my school can best be rated as:

Excellent	Good	Fair	Poor	Don't Know
8%	50	25	6	11

INSTRUCTIONAL LEADERSHIP & DECISION-MAKING

Questions: What are the perceived sources within the school district of instructional leadership for bilingual education?

What is the role of bilingual teachers in educational decision-making?

Data

Teachers and instructional support staff responded to a questionnaire.

Results

Adelante teachers and instructional support staff perceive many aspects of the school system as being significant sources of leadership for bilingual education. They see the bilingual teachers, the bilingual office staff, and Project Adelante as the major sources of leadership. They see building and central office administrators as exerting less leadership in the area of bilingual education, but still playing a significant role. The fact that respondents see all major authority centers as exerting leadership is a positive finding. The fact that they are also most aware of leadership that is close to themselves also seems reasonable. In the absence of any prior standard or conspicuous signal of a problem the results seem reasonable and appropriate.

Seventy-percent of teachers saw themselves as having an influence on educational decisions, and 70% also saw the level or amount of participation as being appropriate. Those teachers who disagreed with this saw a need for more participation in decisions.

Instructional support staff responding to the same questions saw bilingual teachers as having little involvement in decision-making and needing more. The meaning of this difference is not clear; the question as worded may be inappropriate for this group.

Conclusions

1. The perceived distribution of leadership among bilingual teachers, support staff, and the administration appears to be reasonable and appropriate.

2. Most teachers see their building administrators as providing them with adequate opportunities for influencing decision, but about one fourth would like to be more involved than they are.

Table VII- 2
Project Adelante
Perceptions of Leadership and Decision-making
(Percentages of 36 Respondents)

24. Instructional leadership and initiative for bilingual education seems to come mostly from:

	ALL
Central administration	17%
School administration	25
Bilingual Central Office	47
Adelante teachers	64
Adelante Project Staff	47
Other	8
Don't Know	14

25. The role of the bilingual teacher in decision making related to instruction can best be described as:

	Teachers	ISS
Teachers are actively involved in decision making in my school	20%	13
Teachers are consulted before decisions are made by others	50	0
Teachers are not involved in decision making to any extent	30	62
Don't Know	0	25

26. The extent of bilingual teacher participation in decision making related to instruction can be rated as:

Too much or too often	0	0
About right	70	19
Too little involvement or influence on decisions	25	50
Don't Know	5	31

COMMUNICATION & TEAMWORK

Question: How are communications and teamwork related to the Project perceived and rated by teachers?

Data

Four questionnaire items were administered to twenty Project teachers.

Results

All investigated aspects of communications and teamwork was rated as satisfactory by Project teachers.

Teachers rated communication with students as most satisfactory (90% Excellent or Good), and communications with parents as least satisfactory (30% Fair or Poor). Communications with Adelante Project Staff and School Administrators were rated nearly as highly as with students.

Project teachers also rated teamwork among teachers, school administrators as seen as best of these three, and between teachers and the Project as the least of these three, though still satisfactory. Spoken comments to the Evaluator indicate that some of the teachers have missed hhe high level of contact with the Instructional Consultants that had been established in the first four years of the Project, but reduced during the past year as the Project prepared for completion.

Instructional support staff also rated their communications and teamwork with Adelante teachers. Their ratings were lower than the corresponding ratings provided by the teachers. It is not clear from the information at hand why this is so. A reasonable hypothesis is that teachers have lower expectations of these relationships because they have many such support staff to deal with, and little free time for it.

Conclusion

1. Communications among Adelante teachers, administrators, students, and other staff were seen by most respondents as good or better.

2. Communications with parents was seen as satifactory by most teachers but as unsatisfactory by a minority of teachers. (see also Chapter IX.)

3. Teamwork among various groups was seen as good or better by most respondents, but nearly a third saw teamwork between teachers and the Project as fair.

Table VII-4
Project Adelante
Teacher Perceptions of Communications & Teamwork
(Percentages of 20 Respondents)

20. Communications between Adelante teachers and each of the groups listed below can best be rated as:

	Excellent	Good	Fair	Poor	Don't Know
Adelante Project Staff	35%	56%	10%	0%	5%
School Administrators	25	55	15	0	5
Adelante paras	30	45	5	0	20
Other instructional staff in our school	5	60	15	0	20
Bilingual central office staff	15	50	20	5	10
Parents	25	45	10	20	0
Students	40	50	5	0	5

21. Teamwork between Adelante teachers and the Adelante Project staff can best be rated as:

Excellent	Good	Fair	Poor	Absent	Don't Know
25	40	30	0	5	0

22. Teamwork between Adelante teachers and the school administration can best be rated as:

Excellent	Good	Fair	Poor	Absent	Don't Know
5	85	10	0	0	0

23. Teamwork between the school administration and the Adelante Project Staff can best be rated as:

Excellent	Good	Fair	Poor	Absent	Don't Know
0	65	5	10	0	20

Summary

A questionnaire was administered to investigate three aspects of administrative support as perceived by teachers and instructional support teachers. Those who responded perceived this support to be satisfactory. Respondents found the school administration and others to be familiar with their problems and circumstances as was the school climate for parents and students.

The distribution of leadership and initiative among various roles appear in the judgement of the evaluator to be reasonable and appropriate. Teachers find for the most part their opportunities to influence educational decisions to be adequate, though some would like more influence. Communications and teamwork among school personnel was seen as good or better by most teachers but a minority of teachers found communications with parents to be less than good, and a minority found teamwork with the Project to be fair.

CHAPTER VIII

STAFF DEVELOPMENT

Introduction

Staff development has consisted of two major elements: Technical assistance to individual teachers through classroom visits by the Project's Instructional Consultants, and formal staff training activities. The present chapter will describe these activities and provide evaluative information about them.

Evaluation of the technical assistance is based upon a classroom observation study conducted by Dr. Minaya of the University of Connecticut in the spring of 1981, and upon teacher perceptions conveyed to the evaluator in interviews in the first four years of the Project, and in two questionnaire items during the final year of the Project.

Evaluation of the training program component is based upon teacher responses to questionnaires evaluating particular workshops, and upon evaluator judgments about the number, appropriateness, variety of workshops, and with respect to the use of resources in conducting these activities.

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Description of Training Activities

Training related activities fall into three categories: In-service workshops, funding for college courses, and funding for attending professional conferences. These activities are targeted for Project paraprofessionals as well as teachers. When appropriate workshops have also been open to other personnel in the district, though this did not occur in the past year. Funding for courses has been limited and available on a first come first serve basis. In past years the Project has arranged from time to time with the cooperating college to provide a course designed expressly for the needs of the Project. Funds for attending conferences is also quite limited, and several opportunities to attend the annual conference of the National Association for Bilingual Education (NABE) have been provided by lottery in previous years. Parents as well as teachers have attended. Two teachers and a Consultant were funded this year to attend as presenters as well. Attendance at state and city conferences is also encouraged and supported.

The quantity of training activities was reduced this year, especially during the spring because of the need of the Project to obtain closure on its budgeting and reporting activities in a timely fashion for its final year.

Table VIII-1 summarizes the in-service workshops conducted during the past year. There were six workshops. Four were on curriculum: Math, science, and kindergarten pre-reading program called alpha-phonics. The other two were on special education issues for the bilingual teacher, and diagnostic and prescriptive testing in Spanish language arts. Five of these were presented by staff in the Hartford schools, and one was presented by a specialist in bilingual special education from a local University. It may be noted that paraprofessionals were the audience for three of the six workshops. All were organized and sponsored by Project Adelante. The kindergarten alpha-phonics workshop was targeted for a very small audience; three other workshops were also prepared for small groups of interested staff.

Table VIII-1
Summary of 1981-82 Project Adelante In-service Workshops

Title	Dates	Presenters	Audience	Attendance
1. Kindergarten alphaphonics	Nov. 2, 16 1981	Adelante & Hartford Staff	Kindergarten Teachers & Paraprofessionals	4
2. Science Curriculum Training for Teachers	Nov. 10, 17 1981	Hartford Bilingual Curriculum Center	Adelante Teachers	6
3. Science Curriculum Training for Paraprofessionals	Dec. 3, 10 1981	Hartford Bilingual Curriculum Center	Adelante Professionals	4
4. Special Education Training	Nov. 18 Dec. 2, 9, 1981 Mar. 24, 1982	Univ. of Hartford	Adelante	5
5. Teaching Math in an Elementary Bilingual Classroom	Jan. to Mar. 1982 (6 dates)	Hartford Staff	Adelante Paraprofessionals	13
6. Diagnostic & Prescriptive Spanish Language Arts Testing	June 9, 16 1982	Hartford Staff	Adelante Teachers	12

Note: All workshops sponsored by Project Adelante

CLIENT PERCEPTIONS OF WORKSHOPS

Questions: What were client perceptions of the six workshops provided by Project Adelante?

Data

Teachers and paraprofessionals who attended the six workshops were asked to complete an evaluation form. There were a total of 39 respondents to the 8-question evaluation form. The first five questions provided specific response options; these are shown in the accompanying chart. The final three questions call for written responses; the evaluator classified the responses shown in the chart.

Results

Responses to the first five questions show consistently high ratings although the overall rating in question five is the lowest of these. It is however a highly favorable result that all respondents in all six workshops thought the information gathered from the workshops would be directly useful in the classroom.

In question 6, 87% took the trouble to note specific things that they liked about the workshops. In question 7, over 70% provided no indication of any need for improvement. Constructive suggestions involved in most instances the need for more time or more involvement. All of the respondents making constructive suggestions for workshop 5 (Math in the elementary classroom) wanted more time for the workshop. In the other cases most of the suggestions were for more experience with the materials or equipment, or for other personnel to be present for the interaction. Only two complaints were registered in the six workshops.

Seven responded to the request for suggestions for future topics, and four of these responses were for social studies.

Conclusions

1. Respondents showed a high level of satisfaction with the workshops.

2. Respondents rated the potential utility in the classroom of these workshops very highly.

3. The Project planning and Hartford staff presenters were sensitive to the need to make workshops practical.

Table VIII-2
Summary of Client Fvaluations of Project Adelante 1981-82 In-service Workshops

Questions	Response Options	Workshop Number 1	2	3	4	5	6	All	
1. How was this workshop organized?	Well organized	4	4	4	4	13	8	37	94.9%
	Moderately organized	–	–	–	1	–	1	2	5.1%
	Poorly organized	–	–	–	–	–	–	0	0.0%
2. The objectives of this workshop were:	Adequately accomplished	3	4	4	5	13	9	38	97.4%
	Partly accomplished	1	–	–	–	–	–	1	2.6%
	Not accomplished	–	–	–	–	–	–	0	0.0%
3. Will you be able to apply the information presented at this workshop in your classroom?	Yes	4	4	4	5	13	9	39	100.0%
	No	–	–	–	–	–	–	0	0.0%
	Why not?								
4. Did you have enough time to interact with the presenters?	Yes	4	4	4	5	13	7	37	94.9%
	No	–	–	–	–	–	2	2	5.1%
	Please explain								
5. How would you rate the overall effectiveness of this workshop?	Very effective	2	4	1	4	13	7	31	79.5%
	Adequate	2	–	3	1	–	2	8	20.5%
	Not very effective	–	–	–	–	–	–	0	0.0%
6. What was the best thing about the workshop?	Positive response	4	4	3	3	12	8	34	87.2%
	No response	–	–	4	2	1	1	5	12.8%
7. In your opinion, how could this workshop have been improved?	No improvement needed	–	–	–	–	2	1	3	7.7%
	Constructive suggestions	1	1	1	1	4	1	9	23.1%
	Complaint	–	–	–	1	–	1	2	5.1%
	No response	3	3	3	3	7	6	25	64.1%
8. Do you have any suggestions for future workshop topics?	Social Studies	–	–	1	–	3	–	4	10.3%
	Other	–	–	–	1	1	1	3	7.7%
	No response	4	4	3	4	9	8	32	82.0%

SUMMARY OF FIVE YEARS OF TRAINING

Question: What is the nature and extent of staff training carried out over the five years of the program?

Data

Previous evaluation reports and current records of the Instructional Consultant provide the basis for the following summary.

Results

A total of 553 persons have attended 31 workshops. Most of the workshops have been conducted by the Project, some have been conducted by other Hartford staff, and several have been conducted by state and regional sources for bilingual education. Those workshops that have been evaluated by attendees have generally give them satisfactory or better ratings.

Sixty-eight courses have been attended by Project personnel. Two of the courses were designed by or for the Project and were attended by many of the staff. A smaller number were funded to attend college courses. Some paraprofessionals also obtained their G.E.D (high school diploma) with the help of the Project. Some teachers earned Master's degrees. One paraprofessional completed a B.A.

Forty-four persons have attended seven professional conferences, many as presenters.

Topics covered include every subject area in the curriculum as well as special topics such as special education, burn-out etc. While participation in these efforts has generally been voluntary, the Consultant has used her influence to encourage teachers and paraprofessionals to learn more about those areas which have been deemed important programmatically by the Project or the evaluator, such as Spanish oral language.

Conclusions

1. The training aspect of the staff development program has had comprehensive and appropriate topics.
2. A large number and wide variety of training activities have been conducted and attended by both teachers and paraprofessionals in the Project
3. The Project has used not only its own resources but also district and regional sources to implement its program.
4. Within the limitations of the Project, there have been no conspicuous shortcomings in the effort.

Description of Technical Assistance

The Project's Instructional Consultants provide technical assistance to teachers primarily by visiting the teachers in the classrooms. In providing technical assistance, the Consultants discuss problems or situations with teachers and provide suggestions or feedback as requested. They also find and obtain special materials to support instructional needs or direct teachers to sources of information or courses as needed. During the life of the Project these activities have been more intense for beginning teachers or those new to the Project. In these cases, a Consultant may be present in the classroom for a large part of the first several weeks to observe and provide organizational or preparational assistance as well as suggestions and feedback. For experienced teachers, the amount of assistance has varied with the wishes of the teacher. Care has been taken throughout to make clear that teachers are not being evaluated by the Project, and that teachers are not under any obligation to follow their suggestions. Teachers are under the supervision of the school principal, or if requested by the principal, under the bilingual department. The Project has a support role only.

In previous years classroom visits were conducted once a week for each teacher during most weeks of the year. This year the Consultants were also assigned to monitoring pupil placement in the schools. This had the effect of reducing the frequency and regularity of these visits during the past year.

TECHNICAL ASSISTANCE

Question: How effective has the technical assistance provided by Project Adelante been?

Data

There are three sources of information related to this question: The report by Dr. Minaya who conducted classroom observations in 1981 at one of the schools; and interviews from 1978-1981 and teacher responses to general questionnaire items in 1982.

Results

Oral feedback by Dr. Minaya after her observations indicated her perception that the classrooms studied exhibited a high level of coherence and planfulness in the activities of the teachers. She was particularly impressed also by these same qualities in the paraprofessionals. Without denying credit to the classroom staff and building administrators, she concluded that the technical assistance played a large role in this result.

In staff interviews last year and in previous years, the evaluator found new teachers were particularly appreciative of the technical assistance. Several felt that without it they "don't know how they would have made it." Experienced teachers also appreciated the stimulation of the contact as well as the specific support provided. It thus appeared to the evaluator that the regular presence and interest shown by the Consultants was a morale booster for some of the teachers. For other teachers the assistance was seen as helpful but less critical. Two teachers who were experienced found nothing gained from the interaction. On balance perhaps a quarter of the staff seemed to appreciate the technical assistance very keenly, nearly all of the rest found it to be helpful.

In teacher responses to questionnaire items, half perceived the Project as an important source of leadership, and 80% perceived the Project staff familiarity with their problems to be good or excellent, and communications with the Project were seen as good or excellent by 85% of teachers. In the area of teamwork, 65% of teachers (two-thirds) saw Project teamwork with teachers and principals as good or excellent. Nearly half of teachers also saw the Project as a source of leadership and initiative for bilingual education.

Conclusion

1. The available evidence all indicates that the technical assistance provided by the Project has been appreciated by the staff, and that it has been effective in improving instruction in individual classrooms and in developing consistency of instructional goals and techniques across classrooms. It has also apparently boosted morale of some of the teachers.

Table VIII-3
Project Adelante
Teacher Perceptions of Selected Objects of Project Adelante Technical Assistance

7. The familiarity with the problems Adelante teachers face on the part of the groups below can best be rated as:

Project Adelante Director & Instructional Consultants

Excellent	Good	Fair	Poor	Don't know
30%	50%	20%	0%	0%

20. Communications between Adelante teachers can best be rated as:

Excellent	Good	Fair	Poor	Don't know
35%	50%	10%	0%	0%

21. Teamwork between Adelante teachers and the Adelante Project staff can best be rated as:

Excellent	Good	Fair	Poor	Don't know	Absent
25%	40%	30%	0%	0%	5%

23. Teamwork between the school administration and the Adelante Project staff can best be rated as:

Excellent	Good	Fair	Poor	Don't know	Absent
0%	65%	5%	10%	20%	0%

24. Instructional leadership and initiative for bilingual education seems to come mostly from: (check as many as apply)

Central administration	17%
School administration	25%
Bilingual Central Office	47%
Adelante teachers	64%
Adelante Project Staff	47%
Other	8%
Don't know	14%

Summary

Staff development activities consisted of technical assistance in which the Project's Instructional Consultants worked individually with teachers, and three types of training activities. Technical assistance was evaluated using the perceptions of an external observer, and teacher perceptions of various aspects of the Project. The observations of Dr. Minaya and reports in individual teacher interviews were highly favorable. The more general questionnaire items that were not targeted to this specific area were less positive.

Training activities consisted of in-service workshops, funding for college workshops, and supported attendance at professional conferences. In five years 553 teachers and paraprofessionals attended 31 workshops covering a wide range of appropriate topics. Attendees typically rated these programs favorably. The Project has made use of regional and system resources as well as its own. Sixty-eight teachers and paraprofessionals have attended G.E.D., B.A., or graduate courses, some of which were designed for the Project. Forty-four persons attended conferences, many as presenters.

In all, staff development has been comprehensive, appropriate, well received and, as far as there are indicators, probably effective in improving instruction as well.

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CHAPTER IX

PARENT INVOLVEMENT

Background

Research in education has made clear that the extent of a child's achievement in school can be improved when the parents are involved in their child's education both at home and in the school. Accordingly, bilingual projects are expected to make efforts to encourage such involvement.

The ultimate purpose of parent involvement is for parents to support the child's education as manifested in such basics as getting children to school every day, attending parent conferences, and supervising homework. It is generally conceded that Adelante has neither succeeded in this most difficult task nor made significant changes. Accordingly, the aims of the project may be seen as a step toward the above purpose i.e. simply to get parents to school, to engage them in some way with staff or pupils and to make them feel comfortable when they are in the school. Thus, the evaluation focuses as much on the processes the project uses to involve parents as on parent participation outcomes.

The Hartford Public Schools operates bilingual programs in most schools and therefore has policies requiring efforts in the area of parent participation. At a minimum, schools have a liaison person working in the office who is bilingual and can converse with parents who come into the office. Also, documents sent home to parents are printed in two or more languages. The schools may also conduct other programs for parents. Further, the Adelante schools and most others have Title I parent programs, and parents in Adelante may also have children in those programs. In these respects the

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Project Adelante parent component is supplementary to other programs for parents already existing in the schools.

To facilitate the evaluation process, the evaluator provided record keeping forms to the Instructional Consultant to record significant information about PAC meetings, and about the planning and execution of activities for parents. In addition, parent evaluation forms translated into Spanish were jointly prepared to provide parent evaluations of a course taught by the Instructional Consultant. In analyzing these data, the evaluation has examined the overall objectives of parent involvement, the nature of the activities for parents, attendance at those activities, and PAC meetings, differences among schools in parent involvement, staff perceptions of parent involvement obtained in questionnaires, and the parents' evaluation of the course that was taught by the Project.

OBJECTIVES OF THE PARENT INVOLVEMENT PROGRAM

Question: What were the objectives of the Adelante parent involvement effort?

Data

Project records were reviewed looking for statements of purpose and for the actual nature of the activities that were undertaken. Tables IX-2 and IX-3 make more clear adjacent Table IX-1 and the results and conclusions below.

Results

Four objectives were inferred from the records:

1) To form PACs at each school, and to have periodic PAC meetings.

2) To have PACs and parents involved in the planning of activities for parents.

3) To inform, educate, and train parents on school and community matters.

4) To give recognition to parents for their participation in education programs.

Conclusion

1. There were two main goals for this years parent effort: forming the PACs and having them involved in parent activities, and educating parents. These two goals related to every parent activity.

Table IX-1
Project Adelante
Relationship between Goals and Activities

Goals/Objectives	PAC/Parent Meetings	Parent Activities					
		1	2	3	4	5	6
1. To have PACs & PAC meetings	15						
2. To involve PACs/parents in planning parent activities		x	x	x	x	x	x
3. To inform, educate, and train parents		x	x		x	x	
4. To recognize parent participation in education programs				x			x

ACTIVITIES FOR PARENTS

Question: What were the activities for parents?

Activity 1: Social Service Information Program

Three speakers from local agencies spoke on community issues at Hooker School in a two-hour program in October. A person from the University of Connecticut spoke about nutrition, a representative of Department of Child and Youth Services addressed the matter of child abuse, and the Harford Fire Department spoke on fire prevention. A school-wide fire drill was held in the connection with the activity.

Parents reportedly were very interested in the presentation and interacted with the presenters. The nutrition talk led to Activity 2.

Activity 2: Family Nutrition Course

Six two-hour workshops on nutrition were given in October and November at Hooker School. A representative of the UCONN Extention Service gave the course which outlined the major food groups and principles of nutritional planning. Each lecture was illustrated with examples of food prepared by the presenter.

Activity 3: Nutrition Course Graduation

The November graduation program had three parts: parents planned and prepared a meal following guidelines they had learned in the course; the presenter and another UCONN official presented certificates to the parents; and a social gathering and food tasting followed.

Activity 4: Kindergarten Orientation

An open house for the Burns School Adelante kindergarten was held in November. The teacher discussed the Kindergarten program, school policy and provided direction to parents on imporving their children's skills at home.

Activity 5: Parents in Education Course

The Project's Instructional Consultant planned and taught a ten-session course held over a six-week span from March to May. The course addressed issues of parent involvement in their children's education. Topics included school policy, principles of discipline and positive reinforcement, and teaching techniques at home. There were homework assignments, including such things as visiting the child's classroom. A final exam was given, and parents scored an average of 94% correct. The course had parents from Burns and Hooker Schools, and was held at Old Kinsella School.

Activity 6: Graduation for Parents in Education Course

A graduation ceremony was held in May at the Old Kinsella School for the parents in Education Course. Graduating parents were given a certificate by the Project. Refreshments and discussion followed.

Conclusion

1. The theme of these activities is parent education, and recognition of parents' educational accomplishments.

ATTENDANCE AT PARENT FUNCTIONS

Question: How many parents and school staff attended PAC meetings and parent activities?

Data

The Instructional Consultants kept records of attendance at meetings and activities for parents. The data do not include the attendance of Project Adelante Instructional Consultants or Director, only teaching and administrative staff from the three Adelante schools.

Results

Average attendance at PAC meetings was about 12 parents. Burns School had much the highest rate of parent attendance, and Hooker School had many more meetings than the other schools. One school administrator typically attended these meetings.

Attendance at activities for parents was similar, but the average was lowered by Activities 5 & 6 which were held away from the local schools at Old Kinsella and therefore involved transportation logistics that would tend to reduce attendance.

This attendance pattern is similar to that experienced in previous years, and it reflects a high level of interest in a small group of several dozen parents out of several hundred parents associated with the program. It is not known how many parents are not working and potentially available to attend day time activities and meetings.

Conclusion

1. Parent functions are regularly but modestly attended by a small group of interested parents while the majority of parents do not attend such functions.

2. A school administrator and occasionally teachers attend parent functions when it is reasonable and appropriate.

Table IX-2
Project Adelante
PAC/Parent Meetings
Number of Meetings & Attendance

School	Number of Meetings	Average Attendance School Staff	Average Attendance Parents
Burns	4	0.5	22.5
Hooker	9	1.3	8.3
Wish	2	1.0	9.0
Total	15	1.1	12.2

Attendance at Parent Activities

Activity	School	# of Meetings	Average School Staff	Attendance Parents
1	Hooker	1	2	17
2	Hooker	6	N/A	13
3	Hooker	1	5	12
4	Burns	1	1	25
5	Burns/Hooker	11	N/A	7
6	Burns/Hooker	1	N/A	7
Total		21	2.7	10.4

DIFFERENCES AMONG SCHOOLS IN PARENT INVOLVEMENT

Question: Are there any significant differences among schools with respect to parent attendance patterns and the number of meetings and activities?

Data

Project records of PAC meetings, parent activities, and parent attendance were tabulated by school.

In tabulating the data parent attendance for the two multiple session courses was averaged and counted once in these tabultions. The joint Burns/Hooker activities were counted separately for each participating school.

Results

Total attendance was almost identical (129 vs 131) between Burns and Hooker Schools. The pattern of parent involvement in these was different; Burns School had fewer activities and high attendance at each, while Hooker School had more meetings and activities.

At Wish School, the entire parent involvement effort was represented by two PAC meetings, and no officers were selected at those meetings. Wish parents were invited to participate in the joint activities, but none responded.

The situation at Wish was not investigated first hand by the evaluator due to time constraints and a language barrier, but some information suggests that a variety of factors were involved, and that a broad systematic and sustained effort will be necessary to remedy the situation.

Conclusions:

1. There were significant differences among schools with respect to activity and attendance levels in parent involvement.
2. Burns and Hooker Schools had similar levels of parent attendance. Hooker had more activities, while Burns had higher attendance per activity.
3. Wish School had no effective parent involvement by the indicators of number of activities and parent attendance.
4. The situation at Wish School is probably complicated, and will take a systematic and sustained effort to remedy.

Table IX-3
Project Adelante
School Differences in Parent Involvement

School	No. of PAC Mtgs.	No. of Activities	Parent Attendance Average	Parent Attendance Total
Burns	4	3	18.4	129
Hooker	9	5	9.4	131
Wish	2	0	9.0	18

STAFF PERCEPTIONS OF PARENT INVOLVEMENT

Question: How do teachers perceive the effectiveness of school efforts in promoting parent involvement?

Data

Twenty Project teachers and sixteen instructional support teachers responded to four questions in a questionnaire. Responses are given separately for instructional support teachers (ISS), primary (K-2) teachers, and intermediate (3-6) teachers.

The resulting table was complicated. To simplify the presentation, responses were scored on a 4-3-2-1 basis and average ratings were reported.

Results

Perceptions varied consistently across the different groups of respondents. Across all the questions, primary grade teachers and instructional support teachers tend to see parent involvement and communications with parents as good while intermediate goals teachers see it as only fair. This difference in perception is consistent with the traditionally greater involvement of parents with younger children. Many parents of young children in this Project walk them to school and that is the occassion for many of the contacts with the school.

In Question 9 respondents rate school climate for parents as good, and in question 10, they rate specific activities slightly less than good. In question 11, they rate parent response as only fair. Communications with parents is rated as good but marginally so.

Conclusions

1. Teachers rate parent involvement as good in the primary grades but only fair in the intermediate grades.
2. Teachers rate school climate and parent activities as good, but parent response as only fair.

Implications

1. Teacher ratings of the school effort indicates room for improvement especially at the intermediate level, at the same time it suggests that low parent participation occurs despite adequate school efforts to encourage it.
2. Teacher response suggests the possibility of viewing the parents of intermediate grade children as a distinct population, but there were no suggestions as to what might be done differently.

Table IX-4
Project Adelante
Staff Perceptions of Parent Involvement

		ISS	K-2	3-6	ALL
9.	For encouraging Adelante parents to visit school, the climate and attitudes in my school can best be rated as:	3.23	2.73	2.44	2.85
10.	For encouraging Adelante parents to become more involved in their children's education, the kinds of parent activities that have been conducted in our school can best be rated as:	2.83	2.73	2.13	2.61
11.	For actually getting Adelante parents more involved in their children's education, the success of recent parent activities can best be rated as:	2.25	2.27	1.88	2.16
	Averages of Questions 9-11:	2.77	2.58	2.15	2.54
20f.	Communications between Adelante teachers and parents can best be rated as:	N/A	2.82	2.33	2.60

Key:

Excellent:	3.5-4.0
Good:	2.5-4.5
Fair:	1.5-2.5
Poor:	1.0-1.5

PARENT EVALUATION OF COURSE

Question: How did parents evaluate the course on "Parents in Education?"

Data

Parents completed a seven-item questionnaire translated into Spanish by the Instructional Consultant. The English version and translated comments are provided.

Results

Parents unanimously reported the most favorable responses to all questions.

Responses to Question 5: "All the material." "Everything." "The things learned can be used with my children." "Everything." "I liked everything that was done."

Responses to Question 6: "Share with parents from other schools." "Nothing for now."

Responses to Question 7: No suggestions were given.

Conclusion

1. The parents who attended were consistently satisfied with the course.

Table IX-5
Project Adelante
Summary of Parent Evaluation of "Parents in Education" Course
N=8

Workshop Title Parents in Education (Translated)

Date May 6, 1982 Place Old Kinsella School

Workshop Evaluation

Please mark down your reactions to the workshop. Your answers will help us plan other presentations.

1. How was the workshop organized?

Good 100%

Moderately organized 0

Poorly 0

2. Was all the material planned covered?

Yes 100%

Partly 0

Not covered 0

3. Will you be able to apply what you have learned?

Yes 100%

No 0 Why not? ________

4. Did you have enough time to interact with the presenter(s)?

Yes 100%

No 0 Explain ________

5. What did you like best about this workshop?

6. In your opinion, how could this workshop be improved?

7. Do you have any suggestions for topics for future workshops?

Summary

Parent involvement effort was aimed at parent participation through PAC, and at parent education. The project helped establish PACs in Burns and Hooker Schools, and fourteen PAC meetings were held in those two schools. Six activities for parents aimed at parent education were also held in those two schools.

Data gathered indicate that the meetings and activities in Burns and Hooker were well planned, engaged the parents in the planning process, were typically attended by about a dozen parents and a school administrator, and were well received by the parents who attended.

The parent involvement program at Burns and Hooker continues to engage primarily a small group of interested parents. Teachers at the primary level seem relatively satisfied with parent involvement and the school role in it. Intermediate teachers are not satisfied with either. It is not clear what it would take to elicit a broader interest and participation than has taken place in the course of Project Adelante.

The Project has been unable to generate parent interest in parent involvement at Wish School. The situation has not been investigated in detail by the evaluator.

CHAPTER X

ACHIEVEMENT IN THE PRIMARY GRADES

Introduction

The analysis of pupil academic achievement has been divided into two chapters for convenience and clarity of presentation. This chapter examines achievement in the primary grades.

Measures of achievement in this chapter are used to address three educational questions:

1) What is the level or status of achievement among pupils in the Project?
2) What is the magnitude of gain in achievement when pupils are pre- and post-tested?
3) What differences between pairing and self-contained instruction are shown with respect to various indicators of student achievement?

In the present chapter, scores in oral language in both Spanish and English are used to address all three of these questions. Scores in mathematics tested in Spanish, and criterion referenced test scores in Spanish reading are each used to address the first question.

ORAL LANGUAGE IN GRADES 1 AND 2

Question: What are the levels of Spanish and English oral language in grades 1 and 2?

Data

In the scoring process on the Language Assessment Scales, the raw scores which range from 0-100 are adjusted for the age of the pupil so that these "raw" scores are already actually normed in this respect. These raw scores are then converted to level scores on a range from 1 to 5, and each level corresponds to a broad category of language proficiency, whose approximate meanings are described in the adjacent table. Levels 2 and 3 in a second language (English here) indicate a pupil still in the process of acquiring the new language, while such scores in the native or first language indicate a "late language learner" according to the publishers.

The adjacent data show the percentage of pupils at each level by language and grade. Also shown is the average raw score by language and grade.

Results

In Spanish pupils are distributed about evenly across levels 2 - 5. About 40% are categorized as late language learners. Raw scores show that on average, pupils lie between levels 3 and 4. In grade 2 there are fewer pupils in levels 2 and 5; pupils are more strongly concentrated in levels 3 and 4. On average the raw scores show that second graders are not any further ahead than first graders with respect to age norms, and average scores are still between levels 3 and 4.

In English, half of the pupils in the first grade are in level 1 and about one in ten is in level 4. Among second graders only a third are still in level 1 (which has a broad range in raw scores) and over twenty percent are in the top two levels. Grade 2 scores are on average a level high than grade 1 scores.

Conclusions:

1. In Spanish the scores show that about 40% of pupils in each grade level are classified as late language learners, and therefore in need of additional oral language instruction beyond what is normally provided.

2. On average the second graders are at the same level as first graders.

3. In English about half of first graders are in level 1 or are beginning English speakers, and the other half are in levels 2 through 4. In grade 2, half of the pupils are in levels 3 - 5; second graders are on average about a level higher than first graders.

Table X-1
Project Adelante
Oral Scores on Language Assessment Scale in Grades 1 and 2
Raw Scores and Percentage of Pupils at Levels 1-5

Grade 1

n = 44

Level	Spanish	English	Raw Score	Meaning
1	0.0%	54.5%	0-54	Non-speaker
2	18.2	20.5	55-64	Limited speaker
3	22.7	15.9	65-74	Limited speaker
4	31.8	9.1	75-84	Nearly fluent
5	27.3	0.0	85-100	Fluent speaker
Total	100.0%	100.0%		
Average Raw Score	75.9	55.2		
Standard Dev.	9.6	14.2		

Grade 2

n = 54

Level	Spanish	English
1	1.9%	31.5%
2	11.1	18.5
3	29.6	27.8
4	46.7	18.5
5	16.7	3.7
Total	100.0%	100.0%
Average Raw Score	74.2	63.2
Standard Dev.	8.4	15.0

PRE TO POST GAINS ON ORAL LANGUAGE

Question: What were spring to spring gains in Project Adelante with respect to oral Spanish and English?

Data

Raw scores on the Spanish and English Language Assessment Scales from May 1981 and June 1982 were used to analyze gains in the Project. Unusual results led to special statistical treatment and data presentation.

While pre - post correlations in the English battery were satisfactory (0.63), the correlation of Spanish pre and post test scores was only 0.14. This led to further studies of both sets of data, one of which is given here.

Pupils were placed in rank order of their Spanish pre-test raw score and divided in equal sized groups: the bottom third the middle third, and the top third. The post-test scores and the gain scores were then examined for those groups. The process was repeated for the set of English scores. Results are not presented by grade level because the adjacent data apply equally well to both grades.

Results

In Spanish, the group of pupils that were lowest on the pre-test had gains of over 26 points; the middle group had an average gain of only seven points, and the highest group on the pre-test showed systematic decline in score from pre to post testing. Furthermore, there was no significant difference among the three groups on the post test in Spanish.

In English, the pattern is similar but the gains are higher than in Spanish for all three groups. Also the average post test scores are correlated with the pre-test averages; the lowest post test averages comes from the low group on the pre test, and the highest from the high group.

Conclusions

1. Gains in oral proficiency in both languages are systematically related to pre-test scores. High gain is associated with low pre-test scores.
2. Gains in oral English appear to be reasonable and appropriate even though they are lower for children scoring higher at the pre-test level.
3. No group or subgroup has Spanish post test averages in the fluent or near fluent skill levels.

Implications

1. For both languages, instruction appears to be individualized and aiming to raise the proficiency of low scoring pupils.
2. In Spanish, instruction is shifting to literacy skills before many pupils have attained a high degree of fluency in oral language.

Table X-2
Project Adelante
Oral Language Post Test and Gain Scores
Grouped on the basis of Low, Medium,
and High pre-test Scores

Grades 1 and 2

Group		Average Pre-test (S.D.)	Average Post-Test (S.D.)	Average Gain (S.D.)
			English	
Low	30	15.5 (7.6)	46.8 (13.8)	31.3 (15.7)
Middle	32	35.0 (5.6)	62.5 (12.5)	27.5 (12.1)
High	33	58.7 (12.7)	69.5 (10.8)	10.8 (10.6)
ALL	95	37.3 (20.0)	52.9 (15.9)	22.7 (15.6)
			Spanish	
Low	31	48.2 (9.8)	75.0 (10.4)	26.3 (14.3)
Middle	31	66.4 (3.8)	73.0 (8.4)	6.7 (8.6)
High	33	82.9 (6.2)	77.3 (8.0)	-5.3 (9.3)
ALL	95	66.1 (15.7)	75.1 (9.0)	9.2 (16.9)

The Cooperative Teaching Models

Earlier chapters raised questions about the extent to which instruction in Project Adelante was adequately adapted to the educational needs of pupils in the Project. These questions are particularly concerned about the amount of instructional time allocated to different curricular areas. In considering the various instructional models in use in the Project, it is true that the different models affect staff utilization and how effectively teachers can group students for instruction. However, these different approaches (the pairing and teaming models) also differ from the self-contained classroom by providing time structure that requires a fixed amount of time to be allocated to the curricular areas. While the self-contained classroom is at liberty to allocate instructional time as is determined to be best for the student, the pairing model necessarily imposes a requirement that equal time be given to Spanish and English. This can be good if that division is deemed appropriate for the student, but it can be bad if the students are seen to need a greater concentration on one language or the other. The information provided earlier points to the need for greater concentration in the area of Spanish language so that extra time can be allocated to Spanish oral language in particular. Since both models are at work in the Project, the pre and post scores in oral language are available to shed light on whether one model or the other seems better for the Project children.

The primary interest in the study is the contrast between the pairing model and the self-contained classroom. The first grade at Hooker however is a teaming model which might be classified as either self-contained or pairing with respect to the amount of English provided or somewhere in between. The evaluator tried several options, and grouping it as self-contained produced the most conservative results and was therefore the procedure used.

In the study of curricular methods, it is desirable to be sure that test scores results are not the product of differences among students or teachers who are representing the contrasting methods being studied rather than the methods themselves. Ideally this assurance is attained by having large numbers of teachers and students randomly assigned to each method. This high level assurance of the validity of the conclusions that follow do not have this high level of assurance in their validity. However, judgements about the relative merits of teachers and students in the respective models are such that the evaluator believes that the estimate of difference that follows is conservative.

THE PAIRING MODEL AND ORAL LANGUAGE GAINS

Question: How are gains in English and Spanish oral language affected by the use of the pairing model as opposed to self-contained instruction?

Data

Pre and post test raw scores on the Spanish and English IAS are used for analysis. Because the pre-test scores differ between the pairing model and self-contained classrooms, statistical methods are used to estimate the effects of the two approaches after adjusting for these initial differences.

Results

Analysis of the English scores showed no difference in gains despite less instructional time (¼ day vs. ½ day) in the self-contained classrooms. Therefore the scores previously shown apply to both instructional methods.

For Spanish language, the analysis shows an estimated difference in effectiveness of over 5 raw score points in favor of the self-contained classrooms, which have more instruction time in Spanish. This result is statistically significant ($F = 8.34$, $df = 1/95$, $p < .05$). Educationally the difference of one half of a level (see pp. 96-97) is also significant.

The data confirm that on average oral language gains in Spanish are currently stopping on average in the nearly fluent level for the pairing models, and just below the fluent level for the self-contained classrooms.

The Spanish scores confirm that gains decline with increasing pre-test scores and turn negative. There is no pattern of consistent gains as children approach high fluency levels in Spanish.

Conclusions

1. Considering both languages these data show that the self-contained classroom is consistently outperforming the pairing model in grades 1 and 2.

2. Children in the high fluency ranges on the pre-test tend to regress rather than progress in Spanish.

Implications

1. More emphasis in Spanish language development should be given in grades 1 and 2 to students at the high levels on the pre-test.

2. Hartford should move away from the pairing model in grades 1 and 2 for these children because it limits the instructional time available for Spanish with detrimental effect, and because the additional time devoted to English does not appear to purchase additional achievement based on these tests.

Table X-3
Project Adelante
Projected Oral Spanish Scores For Pairing and Self-Contained Instructional Models at Low, Middle and High Levels of Pre-Test Scores

(N=97)

Pre Test Score		Instructional Model			
		Pairing Model		Self-Contained	
		Gain	Post-Test	Gain	Post-Test
Low	48.2	21.9	70.1	27.2	75.4
Middle	66.4	6.0	72.4	11.4	77.8
High	82.9	-8.3	74.6	-3.0	79.9

CRITERION REFERENCED TESTING IN SPANISH READING

Question: What is the pattern of achievement in Spanish reading as measured by the SOBER-Espanol?

Background

In the second year of the Project, Adelante staff working with other relevant personnel in the school system purchased a set of criterion referenced tests of Spanish reading which were designed to measure a set of objectives specified by the Hartford team and closely related to the Hartford curriculum. These tests, covering grades K-3, were administered twice: once on grade level (shown here) and once in relation to actual instruction rather than reported grade level. The results were similar for the two testings, and the simpler set of data are shown here.

Data

The SOBER tests covered twenty or so objectives per grade level in four broad areas of reading: Encoding, decoding, vocabulary, and comprehension. The percentage of pupils mastering each objective was computed, and these percentages were then averaged for the objectives within each of the four areas.

Results

The percentage of pupils mastering any group of objectives at any grade level ranges from 25 to 84%. While there were no formal standards set, typical expectations would be in the 70-90% range. Therefore the overall results are low, but consistent with other measures of Spanish reading achievement in prior years in grades 2-6.

Scores are highest in the first grade. They show a pattern of decline in grades 2 and 3, and are lower in vocabulary and comprehension in those grades.

Conclusions

1. Scores are lower than any reasonable grade level expectations that would be set for these tests.

2. Scores are progressively lower in grades 2 and 3.

3. In grades 2 and 3 scores are lower in the more substantive skill areas of vocabulary and comprehension than in the more mechanical skill areas of decoding and encoding (phonics and writing).

4. The grade placement of pupils in grades 2 and 3 is incompatible with the low mastery levels indicated by the scores. Pupils do not have the skills necessary to be where they are and succeed.

Implications

1. These criterion referenced test scores of Spanish reading tend to confirm the concern that pupils do not have the oral language skill levels in K and 1 with which to successfully engage in learning reading.

Table X-4
SOBER PILOT TEST
Average Percentage of Pupils Mastering
Spanish Reading Skills by Category
Spring 1979

Grade Level	K	1	2	3
N Tested	26	27	25	23
Encoding	54%	65%	57%	48%
Decoding	60	84	66	52
Vocabulary	67	74	56	25
Comprehension	68	71	39	39

MATH IN THE PRIMARY GRADES

Question: How well do Adelante pupils achieve in Mathmatics in Grades K and 1 when tested in Spanish?

Data

Oral directions to the M.A.T. primer level math test were translated into Spanish. The test was administered in the spring of 1979.

Results

Kindergarteners scored at the 44th percentile and the first graders at the 55th percentile when tested in the native language and using regular English norms.

Conclusion

1. Achievement in mathematics when taught and tested in Spanish is satisfactory.

Implication

1. Kindergarten and first grade children are responding to instruction and achieving at national norm levels in subject matter for which they have the prerequisites.

Table X- 5
Project Adelante
Math Achievement
M.A.T. Total Math (Spanish translation)
Grades K, 1 Tested in Spring 1979

Grade Level	n	Standard Score	Standard Deviation	Percentile Rank
K	121	21.7	4.3	44
1	100	33.9	8.6	48

Summary

Scores in mathematics tested in Spanish in grades K and 1 show achievement at national norm levels. Thus this population shows norm level progress in a subject area for which they are prepared. This implies abilities in the normal range as well as satisfactory instruction.

First and second graders were pre and post tested in oral English and Spanish. The level of scores show as in Chapter IV that about 40% are late learners in Spanish and that few are really fluent in English at this grade level. Gains in oral language in both languages are highest for those scoring low on the pre test and lowest for those scoring highest at the pre-test, suggesting that individualized instruction most strongly and correctly supports those with the lowest scores at the outset. In English satisfactory gains are shown by all groups. However, in Spanish post-test scores are the same for all range of pre-test scores so that pupils with high pre-test scores actually show declines on the post-test. Instruction seems to be operating to bring students to less than fluent Spanish oral language levels and to leave them with insufficient skills to support learning in the rest of the academic program.

Analysis of the relative gains from self-contained versus pairing model classrooms further dramatize the findings above. The self-contained classroom (plus ESL pullout) which devotes less time to ESL nevertheless shows gains as large as the pairing model. In the self-contained classrooms which spend more time on Spanish, the extra time pays off in higher gains. It is concluded therefore that the self-contained classroom provided more appropriate and beneficial use of instructional time. The pairing model should therefore be stopped for this population at grades 1 & 2.

Criterion referenced tests of Spanish reading show that scores are lower than any reasonable set of standards for grades K-3. Scores are lower in grade 2 and 3 and more so in vocabulary and comprehension than in decoding and encoding. In light of all data the scores tend to confirm that pupils do not have adequate oral skills to support learning reading skills.

CHAPTER XI

ACHIEVEMENT IN THE INTERMEDIATE GRADES

Introduction

For convenience and clarity the chapter is divided into three sections. The first section answers two questions about achievement in the Project as a whole:

1) What are the levels of achievement in the Project?

2) What gains in achievement are shown by students who have been pre and post tested?

The section will serve the additional purpose of acquainting the reader with the indicators of achievement and the units of measure that are being used to answer the evaluation questions.

The second section will address the following question:

3) What are the differences between the cooperative teaching models and self-contained instruction in grades 3-6 with respect to gains in achievement tested in Spanish and English?

The third section will address the "impact" question:

4) What are the estimated differences between achievement in Project Adelante and a mainstream education program with respect to achievement?

Measuring Achievement

Three indicators of achievement in the intermediate grades are used. First, three subscales of the 1978 Metropolitan Achievement Test are used; Reading, Language, and Mathematics. This test is in English. Second, the Spanish version of the Comprehensive Test of Basic Skills (C.T.B.S.) is used to measure reading and mathematics in Spanish. These instruments were administered in the early spring of 1981 and 1982 to Project pupils. A third indicator of achievement that is used is retention rates.

Units of Measure on Achievement Tests

Achievement tests use a number of different units of measure. In general, each unit of measure is appropriate to answer different questions.

Raw Score: The raw score is the number right, and is not directly interpretable on a norm referenced test.

Scale Score: An arbitrary scale used for statistical computations. Differences in scale scores can be used to determine whether there is growth between pre and post tests, or whether there are differences in skill or knowledge between two groups. Scale scores can be used to compare knowledge and skills across grades.

Percentile Score: A score for defining the rank or standing of an individual in comparison to others at the same grade. A percentile has a range of 1 to 99 and an average of 50 in each grade for the population of students in the norming sample. The norming sample is approximately representative of the nation as a whole in most of these tests. These scores cannot be used for statistical computations, nor for measuring gains or differences.

N.C.E. Score: The Normal Curve Equivalency is a special unit used for reporting in Title I and other programs. Like the percentile it ranges from

1 to 99 with an average of 50 for the norm sample in each grade. However, it is suitable for answering questions about standing, change in standing or differences in standing between persons, groups or testings.

In this report, percentile scores for the Project as a whole will be given early in the chapter, but the evaluation questions will be answered using scale scores and NCE scores.

Retention as an achievement indicator

Retention in grade has two basic aspects as an indicator on program effectiveness. First, high retention rates are an indication that pupils are not achieving at normal rates, and they suggest that instruction or curriculum may not be appropriate in some manner. Second, since retained children are older than their grade-mates they will be eligible to leave school at earlier grades than others, and probably more inclined to do so.

In measuring retention it would be most desirable to use school records of actual retentions. However with the mobile population student records are naturally incomplete for the years the students were not in the school. The evaluation estimates accumulated retentions by using the age or expected grade of the student and comparing it with the actual grade. This indicator estimates the accumulated retentions throughout the student's schooling.

The effect of retention on test scores

When evaluation is interested in measuring the accumulated effects of several years of schooling it is important to group together for analysis those students who entered the program together, i.e. those born in the same year in most cases. Retention has the consequence of mixing the original groupings thus making such analyses more difficult. Simultaneously it affects the test score averages for the various groups. A retained third grader will have the effect of removing his score from the fourth grade, thereby raising its average, but lowering the average of the third grade less. Thus retention tends to raise program score averages unless great care is taken. To compensate for this effect, the evaluation computes NCE scores on the basis of pupil age (the grade the pupil would have been in without retention) instead of on the basis of grade. Project percentile scores and NCE scores are calculated both on the basis of grade and age to show this difference. Subsequent data use NCE scores calculated on the basis of age.

Standard of Educational Significance

In its preparation of evaluation models and procedures for Title I RMC Research Corporation proposed as a rule of thumb standard for educational significance, the standard of one-third of a standard deviation. When used with the 1970 edition of the M.A.T., this standard meant approximately one-third of a year's gain for the average child. This standard seemed eminently reasonable.

When applied to the 1978 M.A.T. and the C.T.B.S. Espanol, however, this standard leads in some grades to the conclusion that in order to be educationally significant, a gain must be eighteen months or more. This standard is wholly inappropriate.

The evaluator has applied the previously obtained standard of one-third of a year and, using publishers' norm data, calculated its equivalence in terms of the scales scores and NCE scores used in this chapter. The results are given in Table XI-1.

Table XI-1
Gains Required for Educational Significance
C.T.B.S. (Espanol)

	Reading		Math	
Grade	Scale Score	NCE	Scale Score	NCE
2	18	6	14	7
3	18	5	17	7
4	14	4	10	4
5	12	3	14	4
6	9	2	9	2
7	9	2	10	2
Avg.	13	4	12	4

1978 M.A.T.

	Reading		Math		Language	
Grade	S.S.	NCE	S.S.	NCE	S.S.	NCE
2	14	4	20	5	24	5
3	14	4	20	5	24	4
4	11	3	20	5	18	4
5	8	2	14	4	15	3
6	6	2	11	2	8	1
7	6	2	13	4	11	2
Avg.	10	3	16	4	17	3

PROJECT ADELANTE RETENTION RATES

Question: What are the Project retention rates?

Data

Project retention rates are estimated on the basis of age and grade level.

It should be noted that a substantial number of pupils in the Project have been retained two or three times (see evaluation reports from prevous years), and the adjacent data count each retention regardless of when it occurred.

Results

Analysis of birth year and grade data show that retention rates are at 34.6% in grade 2 and increase to a high of 64.4% in grade 6. The figures increase with grade level as retentions are accumulated during the school years.

These retention rates are obviously high and tend to further confirm the validity of concerns about a discrepancy between what the pupils need and what they receive with respect to instruction.

Conclusion

1. Retention rates are high in the Project and tend to continue accumulating through grades 2 through 6.

Implications

1. There is a probable mismatch between achievement expectations and the effectiveness of instruction for this student population.

2. Procedures for measuring achievement with norm referenced tests need to be corrected for retention effects when used to measure the cumulative effects of instruction over two or more years.

3. Students who are retained, especially more than once, seem more likely to drop out of school than their peers.

4. Student age data could probably be used in sixth grade to predict candidates for drop-out in secondary school.

Table XI-2
Project Adelante Retention Rates
Accumulated Number of Retentions per 100 pupils

Grade Level	Retentions
2	34.6
3	38.3
4	46.7
5	53.1
6	64.4
7	55.6
TOTAL	47.8

1982 C.T.B.S. TEST SCORES

Question: What were the test results on the 1982 administration of the Spanish version of the Comprehensive Test of Basic Skills for Project Adelante?

Data

Reading and mathematics subscale scores on the C.T.B.S. are given using five different units of measure. Scale scores are given, as are the corresponding percentile and NCE scores based on grade placement. Also given are the percentile scores and NCE scores based on the grade a pupil would have been in if there had been no retentions. These scores are typically four points or so lower since their scores are being compared against the expectations of pupils in a higher grade.

Throughout the chapter the scores of seventh graders are those of pupils who were in Adelante last year and were promoted into the seventh grade. Other pupils who were promoted may have left the system, or were not tested on the C.T.B.S. either because of absences or because they were not in a bilingual program in the seventh grade.

Scores in the adjacent table are given for all who were tested without regard for whether they were pre tested or for their length of service in the Project.

Results

Traditional percentile scores range between 19 and 38 in both reading and mathematics tested in Spanish. There is no systematic trend or pattern in these scores with respect to grade level.

Percentile scores based on age are from two to eight points lower than the traditional percentile scores or at about the 20th percentile.

Conclusions

1. Considering reading and mathematics tested in Spanish, Project Adelante pupils on average are doing better than about one fifth of the students in the norming sample when using percentiles based on age.

Table XI-3
1982 Project Adelante Test Scores
Comprehensive Test of Basic Skills (Spanish Version)

n = 211

Reading

Grade	n	Scale Score	Percentile	NCE	Percentile	NCE
			(based on grade)		(based on age)	
2	46	301.6	34.1	41.4	26.4	36.7
3	54	319.4	20.0	32.3	15.6	28.7
4	39	378.4	29.1	38.4	23.0	34.4
5	40	388.0	20.3	32.5	17.2	30.1
6	30	405.4	19.6	32.0	16.6	29.6
7	11	483.4	38.8	44.0	36.4	42.7
		Mathematics				
2	46	301.4	37.6	43.3	25.3	36.0
3	54	324.2	20.7	31.8	15.6	28.7
4	39	376.7	38.8	44.0	29.1	38.4
5	40	395.9	23.8	35.0	20.0	32.3
6	30	405.8	18.7	31.3	15.1	28.3
7	11	438.3	26.7	36.9	22.1	33.8

PRE POST GAINS TESTED IN SPANISH

Question: What are the Project gains with respect to reading and mathematics tested in Spanish when the same pupils are pre and post tested?

Data

Pupils were pre and post tested one year apart in the early spring as part of district wide testing on the Spanish version of the C.T.B.S. Adjacent data present scale scores and standard deviations on the left of the chart, and NCE scores and gains on the right of the chart.

The scale scores show growth on an "absolute" or cumulative scales while NCE scores are used to determine whether there was any change in standing in the norm tables over a one year period. Only those second graders who had been retained were pre-tested.

Results

Post test scale scores are higher than pre test scores for every grade in both reading and mathematics. All of these gains are educationally and statistically significant ($p < .05$). There is also a significant and appropriate trend to higher scores in higher grades.

There is no significant trend in NCE scores or gains across grade levels. The gains in NCE in reading and mathematics are not educationally significant.

Conclusions

1. Project pupils are showing educationally and statistically significant growth when pre and post tested on the Spanish version of the C.T.B.S. in reading and in mathematics.
2. There is no significant change in the norm rankings of Project pupils who are pre and post tested on the Spanish version of the C.T.B.S. in reading or in mathematics.

Table XI-4
Project Adelante Pre Post Gains on the Comprehensive Test of Basic Skills (Spanish Version)

Grade Level	N	Scale Scores Pre (S.D.)	 Post (S.D.)	NCE Scores based on Age Pre	 Post	 Gain
			Reading			
2	2	243.0 (42.7)	283.0 (12.2)	16.2	17.4	1.2
3	51	287.6 (39.1)	321.8 (50.7)	31.2	29.1	-2.1
4	38	314.2 (52.4)	379.7 (57.9)	26.0	34.8	8.8
5	36	341.6 (44.6)	384.7 (38.5)	25.3	29.5	4.2
6	28	386.8 (43.8)	404.5 (49.5)	29.9	29.4	-0.5
7	10	432.1 (28.9)	488.6 (53.8)	35.1	41.9	6.8
TOTAL	167	329.5 (62.2)	371.5 (66.4)	28.4	31.0	2.6
			Mathematics			
2	4	289.0 (22.1)	321.2 (31.5)	30.2	28.4	-1.8
3	50	289.9 (31.2)	326.2 (41.9)	33.0	28.9	-4.1
4	36	307.4 (47.1)	378.3 (44.7)	23.2	38.8	5.6
5	36	335.2 (32.8)	395.0 (31.7)	25.2	31.9	6.7
6	29	397.5 (44.7)	404.1 (51.5)	35.5	27.9	-7.6
7	10	420.6 (51.7)	444.8 (61.8)	35.1	35.9	0.8
TOTAL	165	330.4 (58.7)	373.3 (56.4)	29.7	32.0	2.3

1982 M.A.T. Test Scores

Question: What were the test results on the 1982 administration of the Metropolitan Achievement Test for Project Adelante in English Reading, Language, and Mathematics?

Data

Scale scores on reading, language, and mathematics are given using five different units of measure. Scale scores are given for reference, as are the corresponding percentile and NCE scores for each grade. Note again that seventh grade scores are for students who were in the Project last year. Also given are the percentile scores and NCE scores based on age level rather than grade level. These scores are all of those tested without regard for length of time in the Project or whether pupils were previously tested.

Results

Scores in Reading and Language are similar. There are no trends across grades levels in the percentile or NCE scores. The median percentile score is the 11th percentile on these two subscales. If the percentile score is based on age rather than grade, it is slightly lower, about the 9th percentile.

In mathematics there is a downward trend in percentiles and NCE scores from the lower grades (2-4) where the scores are in the mid twentieth percentiles to the upper grades where the scores are similar to the reading scores.

Conclusions

1. In reading and language, and in mathematics in the upper grades, Project pupils are doing better than about one in ten pupils in the norm population.
2. In mathematics in grades 2-4, Project pupils are doing better than about 25% of the norm population.

Table XI-5
1982 Project Adelante Test Scores on the Metropolitan Achievement Test

Grade	n	Scale Score	Percentile (based on grade)	NCE	Percentile (based on age)	NCE
Reading (n=226)						
2	27	548.7	18.4	31.0	14.8	28.0
3	39	573.2	12.1	25.4	9.5	22.4
4	34	613.4	13.5	26.8	9.8	22.7
5	41	606.1	5.2	15.9	5.2	15.7
6	40	643.2	13.0	26.3	8.5	21.1
7	45	662.1	10.2	23.2	8.4	21.0
Language (n=230)						
2	29	382.1	10.8	23.9	9.7	22.6
3	41	412.8	9.0	21.7	5.9	17.1
4	33	496.5	11.3	24.5	8.2	20.6
5	41	516.2	7.5	19.7	6.4	18.0
6	41	574.6	14.5	27.7	7.8	20.1
7	45	616.8	10.7	23.8	10.2	23.3
Mathematics (n=227)						
2	29	461.0	27.6	37.5	23.4	34.7
3	41	490.7	19.6	32.0	14.3	27.5
4	33	572.8	29.6	38.7	21.6	33.4
5	41	549.0	8.9	21.6	7.0	19.0
6	38	594.5	15.4	28.5	5.5	16.3
7	45	651.9	11.1	24.3	10.4	23.5

PRE POST GAINS TESTED IN ENGLISH

Question: What are the Project gains with respect to reading, language, and mathematics when the same pupils are pre and post tested?

Data

Pupils were pre and post tested one year apart in the early spring as part of the district-wide testing, using the Metropolitan Achievement Test 1978 edition. Scale scores and standard deviations, and NCE scores and gains are presented.

The scale scores show growth on an "absolute" scale, while NCE scores and gains are used to assess change in standing in the norms.

Results

The scale scores show that there has been educational significant growth at all grades in all three subject areas. This growth is also statistically significant. There is also a significant and appropriate trend to higher scale scores in the higher grades.

There is a gain in English reading for the whole Project of 3.4 NCE points. This gain is statistically significant, and of marginal educational significance, i.e. about 4 months growth. In English language the gain in NCE standing is quite substantial, being 8.9 NCE points are almost one year additional growth beyond what it would take to merely hold rank. In mathematics, the gain of 4.7 NCE points for the whole group is statistically significant and of marginal educational significance.

There are no significant trends in NCE scores or gains across grades.

Conclusions

1. Project pupils as a whole are showing educationally and statistically significant growth in reading, language, and mathematics when the same children are pre and post tested on the Metropolitan Achievement Test.
2. Project children as a whole are showing educationally and statistically significant increases in their standing in the norms with respect to reading, language, and mathematics when pre and post tested on the Metropolitan Achievement Test.

Table XI-6
Project Adelante Pre - Post Gains on the
Metropolitan Achievement Test

		Scale Scores				NCE Scores based on Age		
Grade Level	N	Pre	(S.D.)	Post	(S.D)	Pre	Post	Gain
				Reading				
3	28	526.4	(67.9)	570.2	(62.8)	18.1	21.4	3.3
4	21	539.6	(84.8)	610.8	(41.8)	11.1	23.0	11.9
5	39	570.1	(50.0)	606.9	(51.9)	11.1	16.0	4.9
6	37	624.0	(43.7)	647.0	(44.4)	20.2	22.3	2.1
7	42	641.3	(37.9)	662.8	(39.2)	21.6	20.4	- 1.2
TOTAL	167	588.8	(70.5)	624.2	(57.9)	16.9	20.3	3.4
				Language				
3	28	350.3	(46.4)	425.1	(98.2)	9.7	19.6	9.9
4	20	390.2	(50.6)	491.0	(72.7)	9.0	20.2	11.2
5	38	429.6	(66.7)	518.2	(83.7)	6.9	18.4	11.5
6	36	531.3	(84.2)	583.1	(90.4)	13.9	22.7	8.8
7	42	563.9	(79.5)	616.7	(72.1)	17.8	22.6	4.8
TOTAL	165	467.7	(107.0)	538.3	(106.8)	11.9	20.8	8.9
				Mathematics				
3	29	412.3	(75.5)	491.9	(88.1)	16.1	27.6	11.5
4	20	478.1	(75.0)	560.3	(49.2)	23.5	31.5	8.0
5	38	505.3	(57.6)	552.8	(57.9)	18.2	19.8	1.6
6	35	572.3	(51.2)	599.7	(61.9)	22.5	19.1	3.4
7	43	576.5	(74.9)	654.2	(66.7)	15.6	23.7	8.1
TOTAL	166	517.5	(90.4)	578.3	(87.1)	18.7	23.4	4.7

Cooperative Instruction in the Intermediate Grades

In the previous chapter test score evidence was given that the pairing models allocate too much time to instruction in English and not enough time in Spanish for children in grades 1 and 2. There is reason to believe however, that the equal time allocation they provide would be appropriate in higher grades when most of the students have more preparation in English. The data that follow test that hypothesis using Project data.

At Burns and Wish Schools, instruction in grades 3-6 is self-contained. No formal data exists on the proportion of instructional time devoted to English. At Hooker grades 3 and 4, and grades 5 and 6 have teaming models. In these classrooms the teaming arrangements provide about equal time to English and Spanish, and therefore these are essentially pairing models. While a comparison between these two groups will not reveal any specific instructional practice as a cause, nevertheless it will enable a general conclusion about whether the as yet undefined practices in the self-contained classrooms are currently providing a greater, equal, or lesser educational opportunity. This will provide a limited basis for administrative decisions concerning the use of cooperative models in the intermediate grades.

It may be noted that this comparison will not use retention as an indicator. Even in the presence of a system policy there is likely to be some differences between schools and teachers [illegible] the standards for promotion which may well bias such a comparison.

COOPERATIVE INSTRUCTION IN GRADES 3-6

Question: How do gains in English and Spanish test scores compare among those intermediate grade classes using teaming and those using self-contained intruction?

Data

C.T.B.S. and M.A.T. pre and post test sub score data in reading, language and mathematics are used to compare gains in the two sets of classrooms. Regression analyses are used to determine whether there are significant differences among the classrooms in these grades at the three schools.

Results

Data for grades 3-6 presented in Tables XI-4 and XI-6 were analyzed. There were no significant differences among the three schools, and therefore none among the different instructional models. No additional data are show here. This result contrasts with results on oral language scores found in grades 1 and 2.

Conclusion

1. As currently practiced, pairing and self-contained instruction are equally effective with respect to the tested areas of reading, language, and mathematics tested on the M.A.T., and reading and mathematics tested in Spanish on the C.T.B.S.

Implication

1. Unlike the findings in grades 1 and 2, pairing appears to be a viable method for the Project population in the intermediate grades.

Measuring Project Impact

Intent

Project impact studies are the attempt to estimate whether pupils in the Project are doing as well or better than if they had been placed in the mainstream all-English instructional program. The desired result of an impact study is similar to a research study comparing the relative effectiveness of bilingual education with mainstream education.

Difficulty of the task

Convincing impact studies usually required similar students to simultaneously be served in the instructional programs that are being compared. As in Title I programs, this is not feasible in bilingual education becuase all of the target population needs to be placed in the bilingual program, and none are therefore left to be placed in the comparison program. In the absence of ideal comparisons, other designs have to be contrived to make the esstimates. Usually, the substitue designs that are contrived are less believeable that the ideal designs, and the present case is no exception. Part of the shortcomings of the present designs are made up by presenting two designs, and by conducting several analyses within one of these.

Design 1

Despite the high mobility rates, some of the pupils currently in Project Adelante have had all of their schooling in the Project. Others began their schooling in Puerto Rico, and subsequently transferred into the Project at various grade levels. About four years ago the Connecticut law and regulations governing bilingual education were put into place.

Many of Hartford's Puerto Rican students were then in the mainstream at various grade levels. As the new law went into effect, these students were placed into bilingual education programs, and some of them were placed into the Project. A fourth group of students have moved among two or more of the above types of program (bilingual, mainstream English, education in Puerto Rico) in more complex ways. These four different sequences of educational treatment provide a possible basis for estimating Project impact. Students who were in the mainstream and transferred into the bilingual program are an approximation of a comparison group if their initial equivalence can be established.

In the second year of the Project, the equivalence of these students was estimated by comparing a series of background variables such as birth place, and whether the families were listed as having a phone. Studies found no difference among any of the variables. While this did not establish equivalence, it did increase the plausibility of assuming that they were equivalent.

The design below involves a comparison among four groups of pupils with special interest in two of them. These groups are defined on the basis of their "pattern of educational experience." These patterns and groups are defined as follows:

The Bilingual Pattern: Students who have been in a bilingual program from kindergarten to the time of the study.

The New Arrival Pattern: Students who started their schooling with a primary language other than English, and then transferred into the bilingual program.

The Mainstream Pattern: Students who began their schooling in the English mainstream program, and who entered the bilingual program when state regulations went into effect.

Mixed Pattern: Students who had some other sequence of instruction which ends (at the time of the study) in the bilingual program.

The students in these four groups will be compared with respect to the five standardized achievement scores previously presented in this chapter, and with respect to retention rates. These comparisons span the grade range 2-6 with a post-test only. (The design cannot be applied at lower grades, since virtually all students are in the first pattern.)

Design 2

At the time the state law was put into effect, two of the Project schools had Puerto Rican students in grades 2-6 who were not in the program but the mainstream, and M.A.T. test scores were available from district testing. This set of scores forms the basis of a comparison. While many of these students were subsequently transferred into the Project on the basis of required testing in language dominance and proficiency, others were not so placed. It therefore follows that on average this group was not equivalent to those in the program but it is inferred that they had educational advantages which contributed to their success in the mainstream. In making the comparison between Project students and this comparison group we therefore do not compare the level of scores but the trend of scores across grades. Only the scores in English reading and mathematics are available, and the comparison is further weakened by the change since then of the edition of the M.A.T. This year's and last year's Project students were tested on a newer test.

IMPACT ASSESSMENT: FIRST DESIGN

Question: What is the effectiveness of the Project in teaching those in the Bilingual Pattern vs. the Mainstream Pattern with respect to retention rates and standardized achievement measures in reading and mathematics tested in English and Spanish?

Data

Scores previously presented in Tables XI-2,3 and 5 were analyzed for differences between the four patterns of educational experience, using complex statistical procedures. The use of weighted averages in the table tends to minimize the differences among groups.

Results

Analysis did not identify any systematic difference among the four patterns with respect to any of the five achievement test scores, or with respect to gains between 1981 and 1982 on those same test scores. The data previously presented in Tables XI-3 and 5 are not presented again here.

Analysis did identify strong differences in retention rates among the four groups. All the groups except Mainstream Pattern and the Mixed Pattern were different from each other with statistical significance $p < .0001$. The data are on the adjacent page. While no standard of educational significance for retention rates was devised, these differences have an obvious intuitive significance or educational meaning. The Bilingual Pattern showed an average retention rate of 28.7% while the Mainstream Pattern had a rate nearly three times higher at 75.5%.

Limitation

There has been a major decline in the number of pupils in the mainstream pattern and a corresponding increase in the number in the pupils in the bilingual pattern since the inception of this design several years ago. This change in the distribution of group membership has reduced the capacity of this design to detect meaningful trends in measured achievement. This may account for the finding of no significant differences this year and last whereas such differences were found before. This design probably has no further utility in Hartford.

Conclusions

1. Assessment of impact with respect to retention rates showed significant findings in favor of those pupils who were in the Project from Kindergarten and those who transferred into the Project after some schooling in Puerto Rico over those who began their schooling in the mainstream.

2. No significant differences between the four patterns of educational experience were found with respect to measured achievement in Spanish or English, or gains in those scores.

Table XI-7
Project Adelante Impact Assessment
Retention Rates by Pattern of Educational Experience

Grade Level	Pattern of Educational Experience							
	Bilingual Pattern		New Arrival Pattern		Mainstream Pattern		Mixed Pattern	
	n	%	n	%	n	%	n	%
2	44	25.0	8	37.5	-	-	3	166.7
3	41	31.7	2	0.0	11	63.6	6	50.0
4	24	41.7	4	0.0	13	61.5	4	75.0
5	21	23.8	10	70.0	10	100.0	8	50.0
6	13	15.4	7	71.4	15	80.0	10	100.0
Weighted Average	143	28.7	31	48.4	49	75.5	31	80.6

IMPACT ASSESSMENT: SECOND DESIGN

Question: What are the differences in trend across grades for Project students vs. mainstream Puerto Rican students tested in 1979 with respect to English reading on the M.A.T.?

Data

NCE scores in English reading measured on the M.A.T. are presented for the Project and the Comparison group. Project scores were obtained on the 1978 edition in the spring of 1982 while the comparison group scores were obtained on the 1970 edition in the spring of 1979.

Results

Average scores for the two groups are different by about six NCE points, something slightly less than would be considered educationally meaningful. The trends in both groups are slightly negative, that is scores are somewhat higher in the lower grades, and become somewhat lower in the higher grades. There is no significant difference statistically in these trends, i.e. rates of progress are similar for both groups.

In view of the presumption that selection procedures would have likely placed students less capable of succeeding in the mainstream into the bilingual program, these results in reading are reasonably favorable for the Project, even though it cannot be claimed that they demonstrate an actual advantage for bilingual education.

Test scores in mathematics are presented for the two groups. Averages show that the Project pupils scored about 8 NCE points higher than the comparison group. This difference is educationally significant and statistically significant ($t=20.0, p<.01$).

Conclusions

1. There is no significant difference in the rate of progress between progress in English reading in Project students and students who have been educated in the mainstream according to this design.

2. There was an educationally and statistically difference in favor of the Project over the comparison group with respect to mathematics tested in English. This result is evidence of Project impact or effectiveness in contrast with mainstream education.

Table XI-8
Project Adelante Impact Assessment
Comparison of Post Test M.A.T.
Reading Scores in Project Adelante
and a Mainstream Comparison Group NCE Scores

	Adelante		Comparison	
Grade Level	n	NCE	N	NCE
Reading				
2	27	31.0	18	35.8
3	39	25.4	29	35.8
4	34	26.8	23	37.1
5	41	15.9	27	25.3
6	40	26.3	34	21.8
Unweighted Average	181	25.1	131	31.2
Mathematics				
2	27	37.5	18	33.8
3	39	38.0	29	19.7
4	34	38.7	23	21.0
5	41	21.6	27	20.0
6	40	28.5	34	20.6
Unweighted Average		31.7		22.9

PROJECT IMPACT ASSESSMENTS: 1978-1982

Question: What are results of Project Adelant impact assessments over the five years of the Project?

Data

Results from the first four reports are summarized in the adjacent table. Entries show the measures and years in which assessments were made. In 1978 however the comparison group was another bilingual program. The table shows the result of each comparison: "Adelante" means the result showed a finding in favor of the Project; "N.D." means that no difference was found between the Project and the comparison; and "Comparison" means that the finding was in favor of the comparison group. Two tests of the difference in mathematics tested in English were made this year.

Results

Of twenty-two tests of impact, sixteen were made with respect to measured achievement in English reading, language or mathematics, or reading and mathematics tested in Spanish, using a comparison group which represented a mainstream educational program. Thirteen of the sixteen tests found no difference between the two groups, and three found a difference in favor of the Project.

Of three tests comparing the Project with a mainstream comparison group with respect to rate of retention in grade, all three found large differences in favor of Project Adelante.

Conclusions

1. Project Adelante has demonstrated measured achievement in English reading and language, Spanish reading, and mathematics tested in both languages at the same level as the comparison groups which were used.
2. Project Adelante has demonstrated a much lower rate of retention in grade than mainstream comparison groups that were used.

Table XI-9
Project Adelante
Summary of Impact Assessments 1978-1982

Year	English			Spanish		Retention
	Reading	Language	Mathematics	Reading	Math	
1978	N.D.	N.D.	-	Comparison	-	-
1979	N.D.	N.D.	-	-	-	-
1980	Adelante	-	N.D.	Adelante	N.D.	Adelante
1981	N.D.	N.D.	-	N.D.	N.D.	Adelante
1982	N.D.	N.D.	Adelante (1 of 2 tests)	N.D.	N.D.	Adelante

OTHER FINDINGS SUPPORTING BILINGUAL EDUCATION

Background

Theory in bilingual education indicates that some language skills are unique to a particular language, and other skills are transferrable to a new language with minimum effort. Transferrable skills include conceptual and factual knowledge; they also include certain aspects of reading comprehension and writing. Once a person knows that printed matter holds meaning, and can extract meaning in one language, it takes only oral skills in the new language and a knowledge of the phonics of the new language (sound-symbol relations) to read in the new language. Acquiring literate fluency in a second language is therefore a much swifter process than acquiring it the first time. There are two relationships in the test scores that support these theories and facts.

Findings

1. Gains scores in English reading are predictable on the basis of pre test scores in Spanish reading, but gains scores in Spanish reading are not predictable on the basis of English reading pre test scores. This relationship is stronger in the higher grades.

   By contrast gain scores in neither oral language were predictable by pre test scores in the other language at graded K and 1. These tests measure and are intended to measure the unique aspects of language.

2. New arrivals in the intermediate grades were contrasted with those who had been in the project since kindergarten with respect to English reading. While the test scores are skimpy in the period following arrival, the finding of no difference with length of time in the program suggests what teachers have told us and has been found in Swedish research: Those with established literacy skills much more rapidly acquire comparable skills in the new language.

Summary

There has been one retention in grade for every three pupils in the second grade in the Project, and these figures increase with each grade. There have been about two retentions for every three pupils by the sixth grade. These figures have several implications. First, these figures are quite high, and show low achievement levels. Second, children who have been retained are older than their grade-mates, and these pupils are likely candidates for school drop-out in secondary school. Because so many pupils are retained, these figures have implications for how the educational program is being run. It implies a wide discrepancy between achievement expectations for promotion and what the Project is consistently able to provide in the way of instruction. This will be discussed further in the following chapter.

Scores in reading and mathematics tested in Spanish are at about the twentieth percentile. Fourth graders on average are performing somewhat below average third grade levels, and sixth graders are performing at about the fourth grade level. Pupils are making pre-post gains in these areas; pre-post test scores are about the same rank or percentile score. These low reading scores also mean that children will be having difficulty reading their social studies and science texts.

In English reading and language scores are at about the tenth percentile, while their math scores tested in English are at the twenty-fifth percentile. Scores in all these areas show consistent pre-post gains, and consistent pre-post gains in percentile rank as well.

Scores in achievement in grades 3-6 were contrasted among the three schools to determine whether there were different gains being manifested in the self-contained versus the cooperative models which were operating largely as pairing models. No differences were found with respect to gains in any of the five tested areas, indicating that as currently practiced these models are both about equally effective.

Results this year from impact assessment were similar to the results obtained over the five years of the Project. Estimates of Project achievement versus achievement for comparable students in the mainstream suggest that in areas of measured achievement these two groups are about the same. However children in the Project since Kindergarten have much lower rates of retention than Project children who started their schooling in the mainstream (English) program, i.e. 28.7% versus 75.5%.

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CHAPTER XII

SYNTHESIS AND RECOMMENDATIONS FOR PROGRAM IMPLEMENTATION

Introduction

Chapters IV - VII, X & XI deal with various aspects of the instructional program and its implementation. Many findings in those chapters were thematically related to one another. The purpose of the present chapter is to review and analyze those findings in concert in order to make recommendations in this area. This chapter does not recapitulate the chapters on parent involvement, staff development, or the findings on Project impact.

The chapter will basically argue that most aspects of the instructional program are satisfactory, but that the system by which children are slated for various aspects of the instructional program and judged for promotion is unsatisfactory and connected with the pattern of excessive retentions and underachievement.

Review of Findings

The main finding in Chapter IV was that pupils enter the Project in kindergarten not only with low English skills as expected, but also with very low Spanish language skills as well. Scores in two different tests in this area suggest very strongly the need for additional oral language development in Spanish beyond the intent of the standard curriculum in this area, especially since Spanish oral scores in grades 1 and 2 continue to be low. The chapter also concluded that pupil self concept and attitudes to school were in the normal range. Mobility rates in the Project were high, especially among Hartford schools. This last finding supports the work of the Hartford district in the past three years to standardize curriculum, instructional materials and report cards.

Other data on achievement show that on standardized, norm referenced tests of achievement in Spanish and English scores are lower than norms throughout most of the elementary years. A significant exception is the finding that mathematic scores in Kindergarten and first grade are at national norm levels. In the context of the other scores, the significance of this finding is that this particular curriculum is much less dependent on prerequisite entry skills. Success in this area therefore indicates that when these students have the prerequisites, they are learning at norm levels. This suggests that they are children with average abilities who are receiving satisfactory instruction. Finally, retention rates are very high, starting in the lowest grade and continuing to accumulate through the sixth grade.

Criterion referenced tests of Spanish reading in grades K-3 show that the extent of mastery of curriculum objectives is less than any reasonable expectation level. In English, scores are below norm as expected but show a consistent pattern of gain in percentile rank between pre and post testings.

The Project has a core of experienced and well trained teachers and paraprofessionals. An observational study of instruction also confirms that they are teaching with purpose and using sound instruction methodology. Teacher turnover has been high, so that the Project continues to have a significant percentage of teachers with low experience levels in bilingual education. The turnover has been particularly high in first grade, and the new teachers in these critical positions have also been inexperienced in primary education. Reports of teachers indicate that the school climate for students and teachers is satisfactory, administrators understand their problems, and that they perceive leadership in bilingual education from all relevant domains in the system. Most but not all teachers are also satisfied with the amount of influence they have on educational decisions.

Both the system and the Project have been involved in efforts to update the curriculum guides over the past three years. These efforts are now completed, and teachers perceive the revised guides as satisfactory. Both the system and the Project have also purchased many texts and instructional supplies. At this stage the district has presumably purchased a text for every child in every major subject, but teacher responses to a questionnaire raise a question, and suggest that this conclusion should be checked in the fall after all deliveries are made.

It is the intent of the Spanish language curriculum to parallel the mainstram English curriculum. This curriculum is similar to other curricula in the country with respect to its content, emphasis and standards. With respect to Spanish oral language which is a low area for these pupils upon entry, there is a need for more than the intended amount of instruction. However, several factors seem to result in these pupils receiving less instruction in this critical area in kindergarten and grade 1. For instance, one third of the kindergarten day is properly allocated to oral English. Moreover the presence of the Alpha-phonics program could have the effect of encouraging teachers of moving prematurely into reading readiness skills when more oral language is appropriate unless teacher training is strong on this point. In first grade, the normal expectations to teach reading, and pairing models will have the further effect of reducing time allocated to Spanish oral language development. Scores have shown that providing more Spanish language instructional time in the self-contained classrom improves Spanish scores with no cost to English gains in contrast to the pairing model.

Synthesis

The Project provides a Spanish-English bilingual instructional program to a Puerto Rican population who enters with low oral Spanish scores. To meet the needs of this population, the Project and district provide competent teachers and paraprofessionals, they have updated the curriculum, and have provided extensive texts and other materials to support instruction, and have administrative support from various levels. In most respects the implementation of the program is satisfactory.

However, the low scores in Spanish oral language in kindergarten in about two-thirds of the entering students are followed by a consistent pattern of low achievement in almost every area, and a high rate of retention in grade that includes about half of the students by grade 6. The latter fact in particular is cause for questioning how the instructional program actually works for children.

Perhaps the most basic principle of curriculum and instruction is that every subject matter to be learned has certain prerequisites which have to be mastered before that subject can be learned expeditiously. In applying this principle, schools develop standard curricula based upon the entry skills that most pupils have. This curriculum is implemented through a series of grade levels so that nearly all pupils are able to learn the skills taught in that grade and are therefore made ready to learn those taught in the next grade. Only a few who lie outside the normal range are skipped or retained in order to be exposed to the learnings most appropriate to their skill levels and preparation. When a substantial number of students fall outside this range at the outset, it is necessary to make some adjustment in what is taught at each grade so that pupils pass through the curriculum in an orderly and expeditious manner. This is not happening here.

What we have seen is that children who enter with low skills in Spanish oral language are faced with an actual curriculum which provides less rather than more instruction in this area, The consequence is that many are retained, and others put into a reading program for which they are not fully prepared. During the course of the program that follows in the first grade, several factors also work in the direction of providing less rather than more instruction in this area. Whether retained in kindergarten or first grade, those who are retained are in a situation in which the teacher will have difficulty being able to provide additional work in this area due to grade level expectations or the length of the instructional day left to Spanish. We have seen that teachers apparently stop providing instruction in oral language to children before they have achieved fluency in the native language in those areas needed for success in school.

Thus children who have been retained probably do not get enough remediation either and are then promoted by exception to the next grade. As this pattern continues we find in the intermediate grades that pupils do not have mastery of basic reading skills, and that they are getting progressively weaker in the areas of vocabulary and comprehension, those areas that are most strongly dependent upon oral skills. Moreover their presence widens the skill ranges that the teacher has to teach, weakening the overall effectiveness of instruction. This is one factor which has led to the teaming models at Hooker, and teachers there are still reporting difficulty in coping with the number of reading groups that are required with the skill ranges present. Since these children are also below grade in reading, they also presumably have trouble reading the science and social studies text since those subjects are taught on grade level even when reading and language are not. There is further evidence as we examine the scores in the intermediate grades 3-6 that reading scores in English are dependent upon reading scores in Spanish. Thus the difficulties in remediating oral Spanish can be inferred to be having adverse effects on English reading in the later grades. This finding in the scores is what the theory of bilingual education is about.

Therefore the whole system by which instruction is targeted to children at each grade level needs to be reviewed and changed, starting with the basic area of Spanish oral language in the primary grades.

Recommendations

Revision of the instructional program to deal with this situation has many aspects. Obviously providing a complete program for this is beyond the scope of the evaluation. The recommendations below are therefore intended as a series of suggestions to define the scope of an endeavor which will need to be centrally directed.

Rationale

Several basic facts need to be placed into perspective. Many children enter kindergarten with relevant language skills in Spanish similar to average youngsters almost a year younger. Second, the need to introduce English immediately competes with oral Spanish for limited instructional time in kindergarten and first grade especially. Because of retentions half of the pupils in the Project are now taking eight or more years to complete the elementary years, and are still completing it below national norms. With these facts in mind, the most feasible approach to improving the situation is to conceive of entering kindergarten as entering a modified pre-school program, and to provide an additional year of full-day instruction after kindergarten and before first grade. In practice, the first year of instruction would span pre-K and K, and the second year would span part of the first grade curriculum. While most children would be slated for an extra year of instruction, most already receive an extra unplanned year. Provision would be made for some to skip directly to first grade. In this approach most of the children would get 2½ years of instruction rather than 1½, and many would be somewhat above level as they enter second grade. The extra year would occur when they most need it, and the content would be designed for them rather than for pupils with different needs.

Curriculum Guides

1. Alter the curriculum guides to provide levels A, B, & 1 in place of the current grade levels K & 1, with appropriate content at each level for this population.
2. Review with experts and primary grade bilingual teachers in Hartford whether i) the scope of oral language objectives is adequate for these pupils; and ii) whether the scope of the prescribed learning activities for present objectives is adequate.

Staff & Staff Development

3. Continue high levels of staff development in the district for new teachers.
4. Raise the priority in hiring and placement for teachers who are experienced in bilingual education in the primary grades, especially first grade.
5. Provide staff training on the importance of oral language development and methods of instruction for primary teachers especially.

Instructional Models

6. Do not use the pairing model in grades 1 or 2 for this population.
7. Use pairing or teaming models in the intermediate grades when participating teachers support it, meeting time is available, and administrative support is available.

Testing

8. In the absence of more suitable tests, test this population with the Spanish LAS and the Spanish translation of the PSS at the end of kindergarten (or grade A) in order to help determine the need for grade B (extra instruction before first grade).
9. Continue the development of minimum competency tests for reading, language arts, and mathematics in Spanish. There is a need for such tests in all the primary grades in order to regularize the curriculum and promotion practices, and to better evaluate instruction.

Structuring and Using Minimum Competency Tests

In the past, criterion referenced tests were developed for every detailed instructional objective. This led either to too much testing, or to tests of each objective that had too few items. Moreover, it produced too much paperwork, and produced too much information to be intelligently used.

10. For the purposes of testing and accountability, each broad area of the curriculum such as reading and language arts or mathematics should have perhaps three or four broad objectives which contain or subsume the detailed objectives now present.
11. There should be a single test for each broad objective containing perhaps 15-20 items. These items should cover the range of the detailed objectives. It may be feasible to prepare two or more parallel tests at each grade level from the items that have already been prepared.
12. Pilot test the new tests against student populations judged as masters and non-masters of the objectives being tested.

13. Simplify the skill charts insofar as they are used to record student progress to correspond to the testing program. The detailed objectives should be retained as part of the curriculum guides as these objectives still need to be taught.

Appendix: Technical Information

Design 1

Equivalence of Comparison Group

Since there were no measures of all pupils at comparable times with respect to the education variables of interest, several biographical and socio-economic variables were examined to determine whether there were systematic differences among groups. These variables were:

- Sex
- Place of birth
- Month of birth
- Ethnicity of names
- Neighborhood code
- Possession of phone

No differences were found among groups with respect to these variables, thus enhancing the plausibility of the assumption that groups were equivalent.

Dual Design

The design is implemented as described in the text using four discrete groups as the independent variable. It was also implemented using continuous variables in several variations. These variables basically described length of time in the Project and alternate treatments. These variations all produced similar statistical results.

Statistical Procedures

Statistical tests of difference among groups were also performed in several variations. Discriminant function analysis using the Mahalanobis criterion provided an omnibus test of the six educational outcome variables. Separate heirarchical regression analysis of each of the six were also run to test the continuous designs described above. Grade level was represented as a polynomial and used as a covariate in these procedures. An SPSS program was used.

Design 2

Non-equivalence of Groups

At the time the comparison group was identified, the school had bilingual programs for grades K-6 but not nearly enough classrooms to place all children by the standards subsequently adopted. Selection procedures were not completely formalized but it can reasonable be inferred that those Puerto Ricans placed in the bilingual program were perceived as being less able to succeed in the mainstream than those Puerto Ricans actually placed in the mainsteam.

Statistical Procedures

Analysis of variance was used to test differences between the two groups.

Studies of Pairing

Regression analysis using orthogonal contrart coding were used - pre test scores and grade level were covariates.